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# Macworld

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# mini

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- iLife '04
- Make music with Apple's GarageBand
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# Read Me First

**Simon Jary**
**editor-in-chief**

There were no big surprises at Macworld Expo but Apple has shown that it's ready to ditch its underdog role, and fight from the top for a change.

# Growing up quickly

**'Digital music downloads are part of a sector poised to rip-up the existing order in countless industries. Apple is first to the door in the about-to-explode 'Digital Home' sector.'**

Apple likes to see itself as the little guy fighting the big monopolist. It's a popular image. Everyone likes the underdog, don't they? Well, at most 5 per cent of us do... Apple's Jack Russell is a tenacious mutt, snapping at the heels of the elephantine market leaders, and hounding the sluggish copyists and me-too mega-corporations. Twenty years ago, that monopolistic mega-corp was IBM – presented in Apple's remarkable Mac-launching '1984' ad as Big Brother brainwashing the masses. For the past 15, however, that pantomime role has been played by Microsoft – copying the Mac look-&-feel, boo-hiss, and running off with the burgeoning personal-computer market, leaving Apple in its dust.

Apple's PC market share is laughable, pathetic, and plain embarrassing. Depending on who you believe, it's somewhere between 3 and 5 per cent. That's a figure that can quite easily be ignored. Of course, even 3 per cent of the world's PC market is a giant figure. It's a slim slice for sure, but incredibly chunky compared to bigger segments of many other industries.

Apple's market share must be seen in context. Microsoft's 90-plus per cent overall PC market share is comprised of various guises of its Windows operating system running on everything from build-your-own PCs through near-brainless terminals to heavy-duty servers and workstations. Comparing these to Apple is pointless. Apple's position in select niche markets is, on the other hand, impressive. Movie-makers, musicians, artists and publishers all favour the Mac as the number-one. So the Mac rules supreme in these highly lucrative creative industries.

But mud sticks, and the 5 per cent figure is the snide joke that Apple has to wear wherever it goes. There's no way that Apple is going to overtake Microsoft's 90 per cent – not on its own, anyway. Dreaming of Mac global supremacy is a waste of time. It ain't going to happen, and it wouldn't do us that many favours even if it did.

But Apple has been busy innovating in new markets and ingratiating itself in several others. Very quickly, the company finds itself the major player in the hottest market in town: digital music downloads are part of a sector poised to rip-up the existing order of countless industries. Apple is first to the door in the about-to-explode 'Digital Home' sector.

Its iLife applications – updated and added to at January's Macworld Expo in San Francisco – started the ball rolling, but the revolutionary fire was lit by the iTunes Music Store, which today accounts for over 70 per cent of all legal music-downloads. As Jobs quipped during his Expo keynote speech, "It feels good to be above 5 per cent for once, doesn't it?". It sure does. 70 per cent is the type of number Apple hasn't seen anywhere near its accounts since the long-ago days of the Apple II. And the big numbers keep coming. Over 2 million iPods have been purchased. The iTunes Music Store has sold over 30 million songs, and is on target to sell a staggering 100 million in 2004.

The best number, however, is very small: the iPod is the number-one digital-music player in the world. Apple leads. But where Apple leads, Microsoft usually overtakes and takes over. And the software giant wants to do to Apple what it's currently trying to do to Sony in the games-console market. It plans to launch its own music-download service, and release a slew of portable digital-music devices called Portable Media Centers, which will store and playback video, music and photos.

Apple cannot afford to rest on its laurels. And it isn't. Its announcements at Macworld Expo might not set the world on fire, but they do solidify its position as a number-one. The iPod mini signifies Apple's desire to keep even Microsoft at bay by constantly attacking its rivals with better, smarter products. It has shown its potential at the top-end MP3-player segment – the iPod commands a massive 31 per cent share of the digital-music player market. With the iPod mini, Apple is focusing on another third of the market, populated today by £100-£200 flash-memory players.

This section consists of players that hold a lot less music than the iPod – around 60-100 songs on 256MB of storage, compared to the iPod's 10,000, 40GB maximum. For many people, 100 songs is plenty, and £200 is the upper limit of their gadgetry budget. The iPod mini recognizes this fact, and shows that Apple isn't content to fight just at the top-end of the scale. It's willing to get its knuckle-dusters out at this dirtier end of the market. But its products continue to boast top-end features and smart designs. The mini looks and works better than the competition, and out-scores it by a great magnitude – offering 16 times the storage and music capacity, in a form factor that's half the size. Yet it matches its closest competitor on price – coming in at just £199, including VAT.

The new entry-level iPod proper costs just £49 more for nearly four times the capacity. If you're serious about digital music, the iPod mini is attractive only for its diminutive physical measurements. But the mini comes in at under the £200 threshold that has so far stopped the iPod selling even more than its already impressive sales figures – a whopping 730,000 between October and December 2003 alone.

While it mustn't let its attention wane on the core Mac side of its business – and OS X Panther, iLife 2004 and the Power Mac G5 show that it isn't likely to do that any time soon – Apple must quickly get used to being the big guy rather than the underdog. In its battle for the Digital Home, Apple will surely learn how to better compete in the PC market, as well as bringing millions of impressed iPod and iTunes users over to the Mac. And maybe, little by little, that 5 per cent will start to rise along with it. MW


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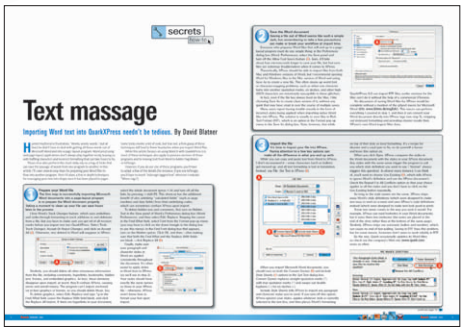



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Importing Word text into XPress needn't be tedious.


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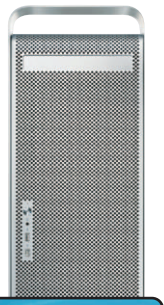
***Sanyo Xacti VPC-C1***
*The world's smallest digital video camera, says Sanyo.*

## BUYER'S GUIDE



169 Macworld's advice for readers buying a Power Mac, iMac, iBook, eMac or PowerBook G4. A full listing of our acclaimed hardware product reviews and group tests for the previous 12 months, with features index and detailed buying advice.

## MACWORLD ONLINE ...EVERY WEEK ONLINE

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**January 16**
"Everything you think you know about colour management is wrong," says Alistair Dabbs in his passionate argument that designers should dump CMYK workflows in favour of RGB.

**January 23**
Daniel James reports: How should one go about working with the open-source software community, which has no obligation to provide support?

**January 30**
Respected telecommunications journalist George Malim reports on the impact and adoption of Apple's technologies (QuickTime, MPEG-4, 3GPP) within the rapidly evolving telecoms industry, asking "does Apple have a place in this space?"

**February 6**
With millions of album sales under his belt, and solid rock and roll credibility, Deep Purple bassist and Mac-user Roger Glover (whose band outsold everybody from Led Zeppelin to The Beatles back in the 1970s) talks to Paul Hooper about Macs in music.

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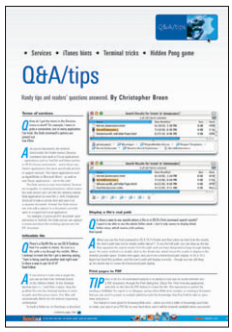


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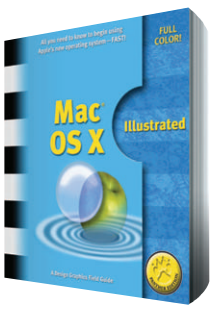


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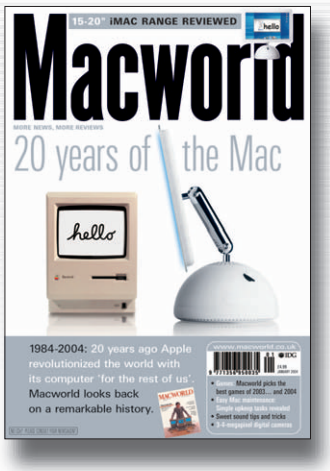
# cc: Macworld letters


15-20 iMAC RANGE REVIEWED
Macworld
20 years of the Mac
hello
1984-2004: 20 years ago Apple revolutionized the world with its computer 'for the rest of us'. Macworld looks back on a remarkable history.

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*Tell us what you think, and you could win a great prize if we publish your letter. This month, courtesy of Softline distribution, we reward readers' letters with a copy of* ***Route Professional*** *(worth £50.99), which is more than just a route planner for all your business and private journeys efficiently. It contains more than a million towns, cities and streets in Britain, 70,000 points of interest in over 40 categories such as hotels, restaurants and petrol stations. Email: letters@macworld.co.uk. Please provide full name and contact details.*

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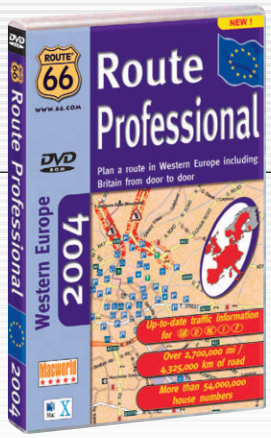
Route Professional
Western Europe
2004
DVD
Plan a route in Western Europe including Britain from door to door
Over 2,700,000 mi / 4,325,000 km of road
More than 54,000,000 house numbers

### ⌘ Broadband bananas

Is it me or are ISPs losing the plot when it comes to telling us about broadband? I don't see car manufacturers telling us to "Buy a car, it has wheels!" or "Drink fizzy-pop, it's cold, sweet and wet" – so why are broadband resellers telling us that "Broadband, it's faster than dial-up". I'd have thought that the point of advertising a particular product over another is to show how *their* car is better than the others and *their* fizzy-pop tastes best.

The funny thing is that the ones who do tell you that their service is better, or they won awards from magazines or they are better value, are also the ones that spend their budgets less on advertising and rather more on creating and sustaining a quality product/service rather than getting people locked into 12-month contracts with one of the big boys.

*Joseph Ortenzi*

### ⌘ If it ain't broke…

Had I written a piece like Simon Jary's Don't look back [Macworld Expo Issue], I would worry that I'd be taken for a jolt-hungry power user with an infinitely extensile budget and a hat size to match. Wintel users are driven to buy new software out of desperation to get anything to work properly. I for one am very happy not to walk the Wintel treadmill. But I'm not going to junk a stable system that works well just to get a bandwidth jolt, either.

What matters is that we get reliable results within an acceptable time frame, preferably making optimal use of our processors. Few real-world users get much more than a small fraction of what their systems can really do, anyway. The real challenge is to raise users' expectations of what can be achieved with a Mac, at which point greater bandwidth becomes both relevant and useful.

*Peter Crosskey*

### ⌘ So long, Quark

I have used QuarkXPress since version 3.0 and have purchased every upgrade, including the bug-ridden 4.0 and version 5.0 which simply didn't work (£300 for nothing). Changing to a new Mac and OS X made me re-evaluate our layout-program use. I decided in the end to dump QuarkXPress in favour of InDesign. Frankly, I just couldn't be bothered jumping through Quark's hoops any longer.

I'm still learning (and occasionally glancing at the handbook) and have succumbed to using InDesign's XPress shortcuts but have absolutely no regrets. I'm finding the crossover easier and easier. So, it's goodbye Quark and thanks for all the... what was it now?

*David Sherwell*

### ⌘ Bad goodies

I've been a .Mac user since the start, and renewed my subscription dutifully last year.

Many cried foul when Apple charged us for .Mac – a service that had previously been free, but I have always defended it.

iDisk is useful, as is iSync – and I simply love the way .Mac's Mail keeps the mailboxes all synched – even when I've been reading them via webmail on another machine.

But... Just before renew time Apple made some effort to actually give us goodies, as it had promised when it first enticed us in.

Yeah, there have been some nice goodies over the year, but not much lately.

So I'm upset that Apple is asking me to pay for iLife '04. This ought to be free to .Mac members as a reward for their loyalty – and it would make a much better 'gift' than some of the frankly useless stuff they've thrown at us lately. Like Photostudio. What's the point of giving us a third-party photo-editing suite (and an ugly one at that) when Panther already has its own in iPhoto?

And why not offer .Mac subscribers first bite at new products – like the iPod Mini, for instance?

*Glenn Le Santo*

The Joy of Tech™
by Nitrozac & Snaggy
WOW DAD, YOU HAVE ALMOST AS MUCH MUSIC HERE AS I HAVE IN MY iPOD!
© 2003 Geek Culture®
joyoftech.com

### ⌘ Panther-order woe

A small gripe. I wanted a new iMac, but with Panther about to arrive, I thought I'd wait so I could get a new machine with a nice clean install. So three weeks after Panther's launch, I bought my iMac – and it arrived with Jaguar. That was disappointing. I know there are such things as lead times, but I bought a Dell Windows laptop at the same time, and it had Microsoft Office 2003 pre-installed, despite it being the week *before* that software's launch. However, here's the crunch: I contacted my dealer (Cancom) who informed me that Panther was available free to post-launch buyers – I just had to ring Apple. Free? Well, only if you consider fifteen quid shipping cost to be "free". Fifteen hundred quid for an iMac, and Apple still won't send you a single DVD without fleecing you further.

*Chris Rand*

### ⌘ Spam, spam, spam, spam…

Can anyone top this. In the rules for junk mail I have added a sound rule which plays the Monty Python spam song.

It doesn't stop the electronic junk that we're all plagued with but it at least makes people smile when it plays and then quietly files it away in the junk folder.

Will the new legislation in the UK and US be any use? I've tried to unsubscribe, unsuccessfully, many times from a Web site called creditgift.com but they still keep coming.

I've junk filtered them but multi-email addresses slip through. The same applies if I try to bounce them, I just get mail failure notices.

*Andy Frizzell*


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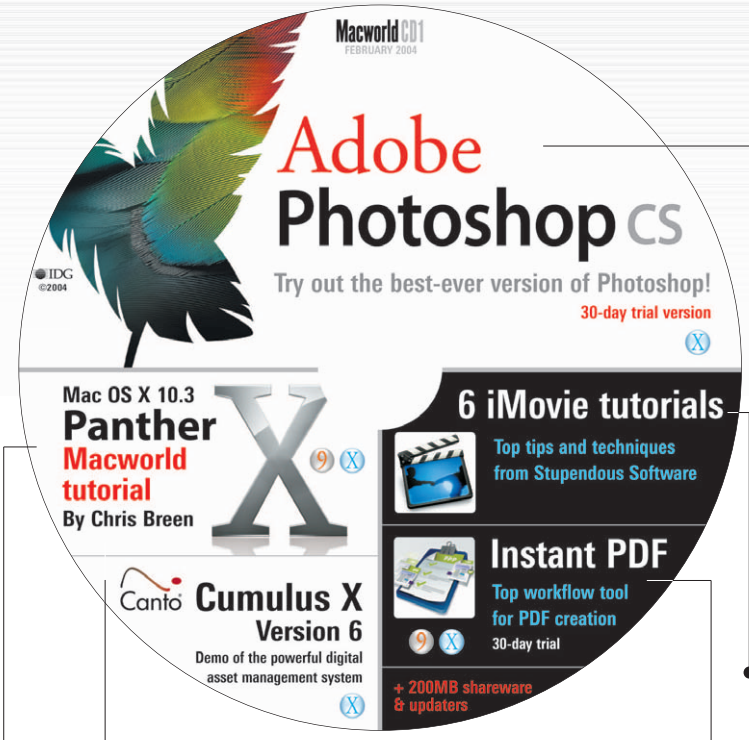
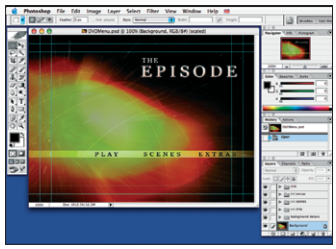
Try Adobe Photoshop CS and Instant PDF for 30 days, check out the demo of Cumulus X 6.0, find out more about Panther, follow the ace iMovie tutorials, and enjoy the mix of shareware and updaters, as Vic Lennard explains...

## MAIN ITEMS




### Adobe Photoshop CS 30-day trial

The best image-creation and -processing package just got better! Adobe Photoshop CS a raft of terrific new features. Achieve a consistent look with Match Color. Quickly improve the contrast of over- or under-exposed areas of an image with Shadow/Highlight correction. Create eye-catching typography by placing text on paths or within shapes. Other features include an improved file browser, comprehensive 16-bit support, integrated digital camera raw file support, Macromedia Flash file export, and customizable keyboard shortcuts.

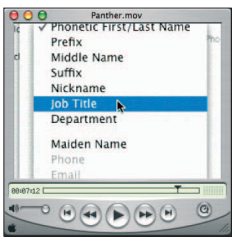



Requires Mac OS X 10.2 or higher.

### Six iMovie tutorials

Courtesy of Stupendous Software, there are six useful iMovie tutorials included on this month's cover CD. To view these, all you need is a Web browser. Topics covered are: textured backdrops; basic compositing – masks; grainy black-&-white look; intermediate compositing – glow outline; intermediate compositing – blue and green screening; and silent film look.

For more info, go to **www.stupendous-software.com**



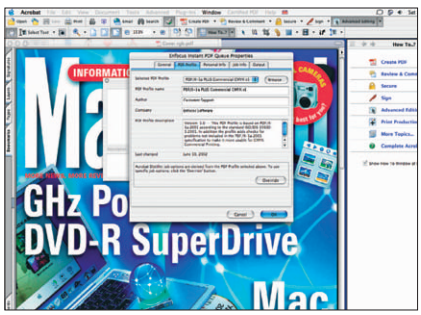

### All about Panther

Hear about the Mac's latest operating system courtesy of Chris Breen's eight-minute movie. In typical fashion, Chris goes through the changes to the Finder, welcomes back OS 9-style labels and explains about desktop zip archiving. Then there's Exposé, FileVault, enhanced Mail and Address Book , better search and help facilities, and more.

### Cumulus X 6.0 demo

Cumulus X is the unique digital asset management tool for creative professionals. It includes powerful search capabilities, multiple-size thumbnail previews, comprehensive customizing options, an enhanced toolbar, the ability to perform multiple cataloguing processes, and pre-configured preference sets.

Requires Mac OS X 10.2.8 or higher.




### Instant PDF 30-day trial

This Adobe Acrobat plug-in is the easiest way to create flawless PDFs from within any layout program. Now PDF 1.5 compatible and capable of fixing JPEG 2000, compressed objects, 16-bits-per-channel images, and layers.

Requires Adobe Acrobat 4.05 or 5.05 in Mac OS 9 or Adobe Acrobat 6 in Mac OS X 10.2.2 or higher.

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# Cover CD1

## FEBRUARY 2004

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## INSTALL

Before you start working your way through the software on our CD, go to the System Utilities folder and make sure you install the following:

### Adobe Reader 6 (OS X only)

Install this to be able to read many of the on-screen manuals. Acrobat Reader 5.1 also available.

### StuffIt Standard

Installers for StuffIt Standard 7.03 (Mac OS 9) and StuffIt Standard 8.02 (Mac OS X) are included.

### QuickTime 6

Some programs require QuickTime 6. This can be downloaded from www.apple.com/quicktime/download.

## INSIDE MACWORLD & SERIOUS SOFTWARE

### iSeek

Handy little program for Mac OS X that allows you to search instantly for anything you need no matter what program you are running. Shareware.

### TrueBlur 1.0.1

Uses an accurate model of optical blur rather than Gaussian to give your images a more realistic-looking blur. Demo.

### InBooklet 3.0

Adds printer spread functionality to Adobe InDesign, providing control over margins, gaps, bleed, creep and crossover trapping. Fifteen-day Trial.

### Snapz Pro X 1.0.9

A single keystroke can immediately save anything visible on screen in a wide variety of image file formats. Trial.

### Demos/trials include...

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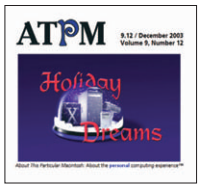
DV Collections
Effect Essentials
Funkeysx 1.0.1
GEM 1.0.2, iPoker 2.2
KidsBrowser, LunarCell
MPEG2Works 3.3, Nicecast
Ovolab Phlink 1.2.1
Path Finder, PDF2Office 1.0
Pseudo 1.2.3, Readiris 9 Pro
Shapeshifter 1.0.1
Speed Download 2.1.2
TextWrangler 1.5
WorkStrip 3.1

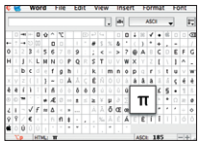
## MAC OS X/9 SHAREWARE & UPDATERS

*Over 70 useful programs, all subdivided into categories, including:*
ABDialer
ABFS 3.3 X
AP Grapher 0.5




ATPM 9.12

Audiocorder 3.9.1
Authoxy 2.2
Backup Simplicity 1.0.2
BirthdayCal 2.0.3
BITcom Xsee

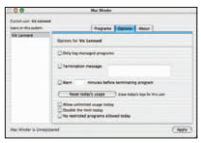


CharView 3.0
ConverTable Units X 2.4.1
Déjà Vu
DockFun! 4.0.8
DivXRay 2.6
Drop Drawers X 1.6.3
EasyCrop
ExportArtwork
Fax Alert 1.0
FileChute
Finder View

FolderIconX
Font Reserve QX 6 XT
FontThing1.4.1

Garbage Man 1.2
iAddressX
iCDc
iChatUSBCam
IconizerPro X

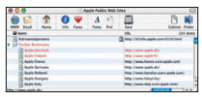
iEvents 2.0.8
iKey 1.05
Intaglio 1.6.3
iPhoto Diet
JPEG Cleaner
Kung-Tunes



Mac Minder
MailSwitch 2.0.0
Maintain
MatrixGL 1.1

MoveItems X
MultipleLauncher X
PhotoToMovie
QuickPlay CM
Rendezvous Browser
SafeShred
SlowMotionSmoother 1.0

Steam 2.0.1
SwitchRes
TftpServer
TinkerTool
uCalendar X 3.1.1



URL Manager Pro 3.1.1

ViewIt 2.3.1
Wallet
WhatSize 10.2.4
XRay 1.09

UPDATERS

*This month's dedicated updaters folder includes almost 50MB of patches to bring many popular applications bang up-to-date, including:*
IgniterX 6.1
Imposer 2.6
Imposer Pro 2.6
NAV Dec 03
Personal Backup 10.3.2
StuffIt Deluxe 8.02
Virex Dec 03

## CD CATALOGUE

Courtesy of Mark Pirri's superb DiskTracker program, Macworld brings you a searchable catalogue of all our CDs from 1997 to 2004 – over 435,000 files! This will grow month by month to allow you to find any file you want, without wearing out your CD-ROM drive. The latest version of DiskTracker (2.3) is also included – don't forget to register if you find our library useful.

## FAULTY COVER CD-ROM?

- If your cover disc is broken and you want a replacement CD, please contact Minesh Patel, on 020 7831 9252, or email at mineshp@macworld.co.uk
- If your cover CD doesn't seem to work as it should, please check you have read all the instructions on the cover disc pages carefully first. If it still doesn't work, then please email cd@macworld.co.uk
- Drag installer files from the CD to your desktop before clicking on them.

## DON'T MISS...

### Cool Extras

Two new sets of icons:
- Oh my rabbit! – 50 icons to take over your system from Julia Nikolaeva
- Lotsaballs – 21 icons for a whole host of games from Jamie McCanless

### Mac ISP

Access offer from Moose Internet Services.

### Netscape/Internet Explorer/Opera

Netscape X 7.1, IE X 5.2.3, IE 5.1.7 & OE 5.0.6, and Opera 6.0.3

### Plus...

... many thanks to Simon Youngjohns (youngjohns@hotmail.com) for our CD icons.

## SHAREWARE

Association of Shareware Professionals

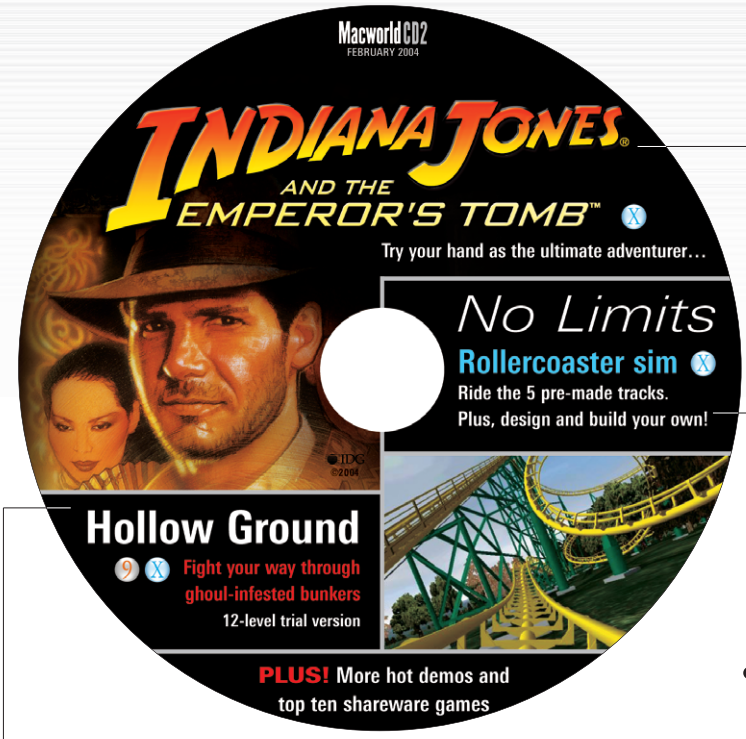
Shareware is a distribution method, not a type of software. It makes fitting your needs easier, as you can try before you buy. Shareware has the ultimate money-back guarantee – if you don't use the product, you don't pay for it. If you try a Shareware program and continue using it, you are expected to register. Support shareware authors so that they continue to provide high-quality programs for the Mac.

page 14

# Cover CD2

Play the part of Indiana Jones, take the rollercoaster ride in NoLimits and go blasting in Hollow Ground. Our second CD games special also boasts the latest hot demos and our usual blend of shareware games – enjoy!

## MAIN ITEMS


Macworld CD2
FEBRUARY 2004
INDIANA JONES
AND THE EMPEROR'S TOMB™
Try your hand as the ultimate adventurer…
No Limits
Rollercoaster sim
Ride the 5 pre-made tracks.
Plus, design and build your own!
Hollow Ground
Fight your way through ghoul-infested bunkers
12-level trial version
PLUS! More hot demos and top ten shareware games

## Indiana Jones & the Emperor's Tomb

You're Indiana Jones, legendary adventurer – and the most butt-kicking archaeologist the world has ever seen. It's 1935 and this time you must prevent a powerful Chinese artefact from falling into evil hands. It'll take more than a whip and pistol to avoid deadly traps and navigate through dangerous environments. Do you have what it takes?

Play part of the game with this demo.

Requires Mac OS X 10.2.6 or higher, an 800MHz PowerPC G4 or better, and a high-quality video card.

## NoLimits demo

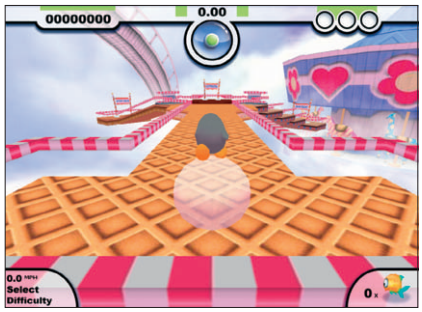
Focusing on realism and speed, NoLimits lets you ride real existing coasters, or build a rollercoaster to your own specifications with 13 track styles, including inverted, hyper-coasters and wooden coasters. This demo lets you ride on five ultra-realistic roller-coasters and use the track editor but the latter is save-disabled.

Requires Mac OS X 10.2.4 or higher.

## Hollow Ground

Hollow Ground is a one- or two-player 2D tactical action shooter. Strategy is simple: if it moves, kill it. On completing a floor, go to the next one and conduct the same level of mayhem! This demo allows you to blast your way through 12 floors.

Requires Mac OS 9.2.2 or Mac OS X 10.0 or higher.




## Hot demos

Go gaming in Burning Monkey Casino 1.0, enjoy Captain Bumper 1.15, a cartoon-style blast-'em-up, and play CrossCards 3.0, a mixture of poker and Scrabble. Guide the snowball-riding penguin in Snowball Run 1.0 (above) and try Geneforge 2, a fantasy role-playing game.

Finally, ToySight 1.0 offers a set of cool games for your iSight or FireWire camera.

## Top 10 Games

This month's Top 10 Shareware Games has some nice board games, including Project Gridlock 1.3, and some goodies for the strategists such as Pop the Wheezil 1.0.1 (above). On the arcade front there's the platform Yibbah! 1.0 and RendezvousPong. And don't miss Sveerz 1.1, a musical puzzle game with a hiphop beat. Simon Says will never be the same again!

# Apple calls the tune at Macworld Expo

**Apple begins 2004 at the cutting-edge of the emerging digital-music industry, the company revealed at January's Macworld Expo San Francisco 2004. Marking this, Apple upped the capacity of its entry-level iPod from 10GB to 15GB – for the same £249 (including VAT) price tag, and expanded its iPod product offering with a new member of the family (see opposite page).**

**Apple also introduced a new version of iLife, featuring a spectacular consumer music-making product, GarageBand.**

**Other show highlights included the first showing of Microsoft's forthcoming Office 2004 for Mac.**

Available from January 16, iLife '04 costs £39 (including VAT) or ships for free with any new Mac. Apple's popular practice of releasing much of its iLife software for free download ends with this incarnation. During his opening Expo keynote speech, Apple CEO Steve Jobs called iLife "The Microsoft Office for the rest of your life".

## Band in a box

**GarageBand** transforms a Mac into a professional-quality musical instrument and recording studio for musicians at any skill level. iLife '04 also features new versions of iPhoto, iMovie, and iDVD, as well as the current version of iTunes.

GarageBand offers users a host of music-making features covering the gamut of sound creation, and moving forward to recording, editing and sharing music they make – using Apple's customary simple user-interface.

Users can combine self-created sounds (analogue and digital), loops, and more than 50 software instruments to make a song. But be warned: it requires a 600MHz G3 processor or faster, while a G4 or G5 processor is required for GarageBand's software instruments.

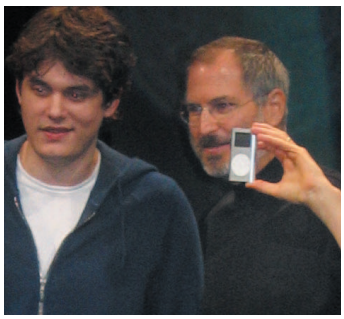
The application ships with 50 instruments, including a premium-quality grand piano that can be played and recorded with any USB or MIDI music keyboard. It also offers 1,000 professionally recorded audio loops that can be added to make tunes or backing tracks. Vocals and live instruments such as guitars can be recorded digitally via microphone or analogue input. Tracks can be edited and mixed with over 200 pro-quality effects presets, including reverb and delay.

GarageBand offers six simulated vintage amplifier sounds, and users can share songs using iTunes, to which the application can export tracks. Exported tracks can be burnt to CD, encoded to MP3 or AAC, carried and played back on an iPod (or iPod mini), or used by other iLife apps.

Apple also announced **JamPack**, a £69 collection for GarageBand offering another 2,000 musical loops; 100 additional software instruments – including a grand piano, 12-string guitars, vibraphones, drums, new organs, synthesizers and basses; over 100 additional pro-quality effects presets; and 15 additional software-simulated guitar amps.

**iPhoto 4** users can now scroll through and resize up to 25,000 photos in just seconds – a major improvement on version 3. This version also introduces Smart Albums, a feature that automatically

**'GarageBand does for music creation what iMovie did for video – makes the creative process easy and affordable for everyone'**
**Apple CEO Steve Jobs**



***Music maestro***
*Musician John Mayer helped Jobs demonstrate GarageBand. Mayer complimented the quality of GarageBand's guitar simulation on the MIDI keyboard, and then demonstrated GarageBand's ability to simulate vintage and modern guitar sounds using a guitar. He also demonstrated a GarageBand composition combining recording, loops and his own live performance.*

# and Office 2004 are show highlights

organizes photos based on date, keyword or the user's rating. Users can also ascribe an iTunes-like star rating to images to help locate favoured pictures.

The improved slideshow option offers cinematic transitions and controls for rotating, rating and deleting photos quickly. The product introduces Rendezvous photo sharing between networked Macs. Apple also announced that online photo ordering for Europe-based iPhoto users will be available in March. "Sorry it took so long," said Jobs.

**iMovie 4** can now edit directly in the timeline. Users can also select and edit multiple clips at once to modify and render them faster. iMovie 4 offers graphical audio waveforms and live audio-scrubbing, so users can find specific edit points in audio tracks and sync those to the movie. It's possible to import video directly from Apple's iSight camera to the clips panel. Movie-makers can compress and export their creations to the Internet.

**iDVD 4** offers 20 new Hollywood-style themes – some with intro movies and sub-menus – that can be personalized with music, photos and movies for truly original DVDs. Content from other iLife applications can be added directly to a DVD via the media browser, and enhanced photo slideshows can include cinematic transitions and iTunes playlists. The new DVD Map provides an overview of entire DVD projects. Apple has also borrowed video-encoding features from its Final Cut Pro product so home users can fit over two hours of professionally encoded video on a single DVD.

### Quiet kick-off

"We've kicked off our 20th anniversary year with some great new products," Jobs summed up after the two-hour speech. "And there's a lot more coming in 2004," he promised.

Some keynote attendees were disappointed at the lack of new or upgraded Macs, as Apple approached the January 24 anniversary of the original Mac.

However, 2003's product upgrades were largely announced at special events, such as Apple's Worldwide Developers Conference in May, at which Panther was launched. Apple appears to be announcing new Macs only when it is ready to confirm availability. **MW**

**Jonny Evans**

# iPod mini: 1,000 songs on a 'business card'

**While it continues its attempts to "eradicate competition in the hard-drive digital-music player market", Apple has introduced the second member of its iPod family. The iPod mini is a new product designed to seize sales from the higher end of the flash-memory based music-player market. Announcing the business-card-sized music player during his keynote speech at Macworld Expo San Francisco Apple CEO Steve Jobs said: "iPod mini joins the iPod family of best-selling digital music players, offering customers the same 1,000 songs in your pocket as the original iPod in an innovative design that's half the size. We think it's going to be pretty popular, especially with younger music lovers."**

**The 4GB capacity iPod mini is encased in a lightweight anodized-aluminium body, weighs 3.6 ounces and is available in five colours – silver, gold, pink, blue and green. It matches the iPod's backlit screen viewable user interface and offers a patent-pending Click Wheel for navigation. It is compatible with Apple's existing music products – iTunes and its online Music Store. The cross-platform product gets its music from Macs or Windows PCs using either FireWire or USB 2.0. It also recharges itself over either USB 2.0 or FireWire, and offers eight hours battery life on one charge.**

**Apple calls iPod mini "the ultimate fashion statement". Buyers get a pair of white earbud headphones and a new belt clip. Optional accessories include a armband for on-arm iPod carrying, superior headphones and a dock.**

**iPod mini can be custom engraved and will be available in the US in February and worldwide in April. It costs £199 (including VAT) – though the price will be subject to change, Apple sources told Macworld.**

### Music success: facts and figures

**Apple shipped 730,000 iPods in the just-passed quarter, and has to date sold over two million iPods. It now claims 50 per cent of the global MP3-player market.**

**While final MP3 player market-share figures for December 2003 aren't yet available, Jobs claimed that "figures for October and November show Apple with 31 per cent market share and 55 per cent of revenues – across the whole global MP3 player market, including those tiny Flash-based music players no one ever uses."**

**Apple has also sold "over 30 million" tracks through its iTunes Music Store. "That's tens of millions of sales above the competition", Jobs said. "We have 70 per cent of the market. The single biggest-buying iTunes customer in the US has spent $29,500 expanding his digital-music collection," Jobs revealed.**

**Other iTunes facts: Apple has sold 50,000 audio books since October, 100,000 gift certificates, and now stocks 500,000 songs – which is more than anyone else, Jobs claimed.**

**On Apple's involvement in music, Jobs said: "We love music: we love it just like you do."**

**He added: "By enabling music lovers to carry their entire music library with them at all times, iPod is clearly changing the way we enjoy our music, much the way the Sony Walkman did decades ago."** **MW**

## First on Xgrid

**Apple previewed Xgrid, a computational clustering technology from its Advanced Computation Group (ACG) at the Expo.**

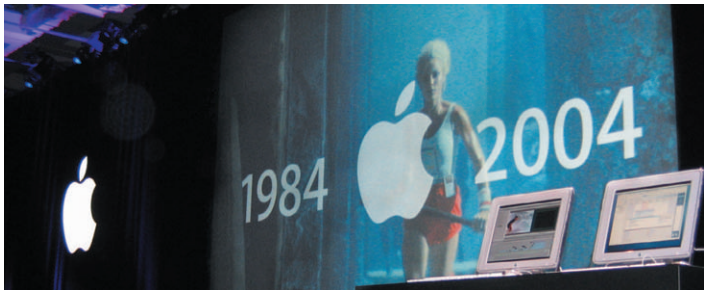
**Available as a beta, Xgrid lets users in computationally intensive environments build a grid-enabled "virtual" IT environment that exploits unused computer capacity to run batch- and workload processing jobs.**

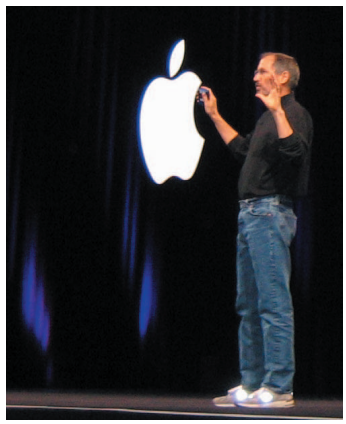
**With Xgrid running on Xserve G5 servers in a 42U rack, up to 84 Power PC G5 processors can be clustered to offer 1.5 teraflops of processing power – a small-scale supercomputer, in other words.**

**Customers from NASA, Genentech, Simon Fraser University, Reed College and Virginia Tech have been testing Xgrid on clusters of Mac desktops, portables and servers, Apple said.**

**Apple also announced new Xserves at the show. For more details see page 24.**

# OS X: switch is complete



The transition is officially over", Apple CEO Steve Jobs said of Mac OS X during his keynote speech at Macworld Expo San Francisco. "We made it!", he said.

Jobs revealed that over 9.3 million active Mac OS X users exist today, and predicted the company would cross the 10 million barrier "within 13 weeks". Over 10,000 native Mac OS X applications also now exist, he said.

"Panther is the fourth major release of Mac OS X in three years, and we plan to reach 10 million active Mac OS X users this quarter, which is 40 per cent of our entire installed base," said Phil Schiller, Apple's senior vice president of worldwide product marketing. "This is a major milestone in the successful adoption of the world's most advanced operating system."

"This is the fastest OS transition on record," claimed a beaming Jobs.

It was all a far cry from the launch of the Macintosh back in 1984. And to show how far the company and the PC industry has come since then, Jobs showed the Mac's original sales materials – which had to explain how a mouse works, and how to use a graphical user interface.

Jobs also showed the company's ground-breaking '1984' Mac-launch TV commercial. The audience broke into laughter when they noticed that Apple has cheekily added an iPod to the hammer-thrower's belt. Posters of the updated image were quickly collected by show goers from Apple's giant booth. **MW**

**'The transition to Mac OS X is officially over. We've made it!'**
**Apple CEO Steve Jobs**

# Information central to forthcoming Mac Office 2004

Microsoft's Macintosh Business Unit (MacBU) has shown off the next major upgrade of its Office suite of products. The applications included in the Office suite will get some major updates, but users won't be able to buy Office 2004 until sometime in the first half of 2004.

Tim McDonough, director of marketing for the MacBU, said that Microsoft has identified three areas its customers wanted improved in Office: managing information; creating files so that they look the same on the printer as they do on the computer; and the ability to more easily share information with others.

To allow users to better manage information, Microsoft has created Project Center as a part of Entourage. Project Center lets users view emails, files, contacts, meetings and tasks related to a particular project – all in one place. Users can set up a project and define criteria for the information they want to include in each project through a setup wizard, and then view each project separately. Information or criteria for a project can be added or deleted at any time without deleting the actual email message or file.

Word will come with a new view called Notebook, which will resemble ruled notebook paper. The Notebook view lets users jot notes, but also includes calendar events, sets priorities and has unlimited tabs to organize information. The Notebook view allows for the recording of audio directly into the notebook. For instance, if in a meeting taking notes, you can click the record button to record the meeting and attach it to a note to listen to later.

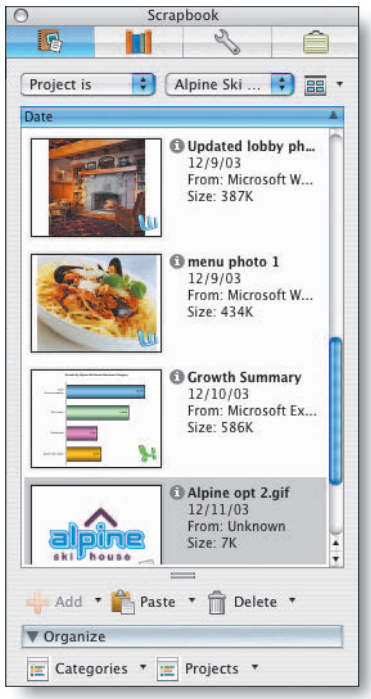
A new Scrapbook feature (right) allows users to save text, logos, pictures and other types of media in a central location that can be used in a project later. The Excel Page Layout view shows on-screen exactly what will be seen on paper when a spreadsheet or chart is printed, including margins, and headers and footers.

With so many versions of Office products available on Windows and Macs, Office 2004 will include a Compatibility Checker. When ready to share a project or document, you can run the Compatibility Checker against a variety of Office versions to see if anyone will have a problem viewing any special media or formatting.

Customers who purchase Office v.X from January 6, 2004 until 30 days after the release of Office 2004 will be eligible for a free upgrade. Other pricing details were not available.

McDonough would not go into much detail on the next version of **Virtual PC for Mac**, but did say that version 7.0 would be available in the first half of this calendar year. The new version will include enhancements over the current version 6.1, including performance and usability improvements, as well as compatibility with the Macintosh G5. No pricing information was available. **MW**

**Jim Dalrymple**



# Encode of conduct

Discreet plans to integrate encoding technologies across its product range, including the Mac version of Combustion 3, which it announced at Macworld Conference and Expo this month.

The company is closing the offices in which the development team for its Cleaner products worked, transferring "selected resources" to its development centre in Montreal, where all product development will now be based. This means encoding technologies – which the company considers a "critical component" of its strategy – will be introduced within future versions of its products. While Discreet will continue to support and sell Cleaner XL and Cleaner 6, it guarantees no future releases as a result of the move.

Combustion 3 is the latest version of Discreet's award-winning visual-effects software. The product combines vector paining, animation and editing tools with 3D compositing, and has been custom-built for the creation of effects and motion graphics for video, film, DVD and the Web. This version offers new features for broadcast professionals, including ways to repurpose video for the Web, and special effects creation for movies and HDTV.

Enhancements include user-definable brushes; savable presets; timeline markers and digital video capture and output features. The product will also offer advanced support for third-party plug-ins and better integration with Adobe After Effects and Photoshop plug-ins.

Powerful new features also appear, leading general manager Paul Lypaczewski to say that the product: "Will push the boundaries even further for our Mac customers."

Web-focused moving-image editors can use the vector paint and animation interface tools in Discreet's product to create and output Flash animations. Reflecting a strategic move by Macromedia to introduce JavaScript support in the high-level Director MX 2004, Discreet now supports JavaScript in Combustion. This means JavaScript-savvy artists can create complex animations using a language they understand.

Discreet also claims Combustion 3 to be the "first visual effects application with integrated editing," meaning users can implement simple editing tasks from within the tool, with no need to master a second non-linear video-editing application. It makes it possible to assemble video with transitions in Combustion.

Combustion 3 will ship in "early 2004", the company said. It will cost $995, while an upgrade from Combustion 2 or 2.1 costs $199. UK was pricing unavailable as Macworld went to press. Call Discreet reseller Tyrell Corporation for more information (020 7343 5500).

**Jonny Evans** **MW**

## Mac calendar, 2003/04

**February 2-5**
**Imagina 2004**
Monaco, France.
Leading European event for the worldwide digital-entertainment industry.

**February 9-12**
**O'Reilly Emerging Technology**, Westin Horzon Plaza, San Diego.
A look at mobility and social software.
http://conferences.oreillynet.com/etcon

**February 10-12**
**VIZFX**, Wembley, London.
2D, 3D and animation tools.
www.vizfx.co.uk

**February 10-12**
**VideoForum 2004**
Wembley.
The UK's biggest technology showcase for production, new media, and streaming.
www.videoforum.co.uk

**February 10-12**
**Sounds Expo**, Wembley.
Event for musicians, producers and sound engineers.
www.sounds-expo.co.uk

**February 22-25**
**Focus on Imaging 2004**
Birmingham NEC. Europe's biggest imaging show
www.focus-on-imaging.co.uk

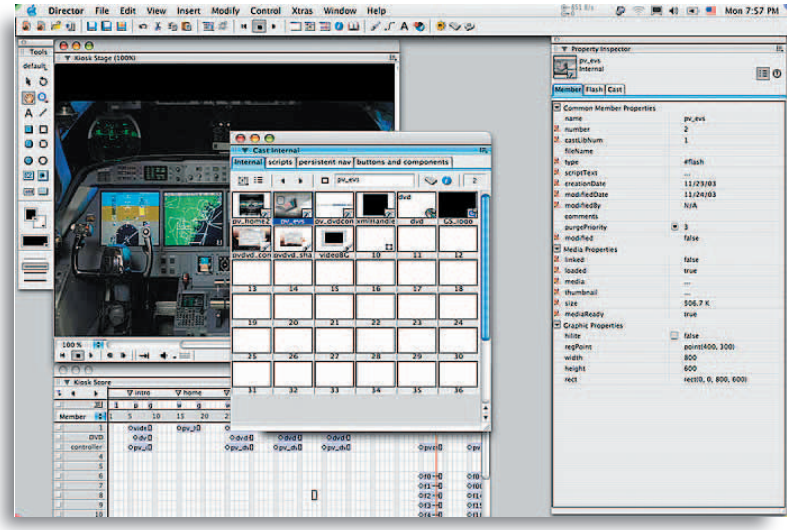
**February 24-26**
**Screen-Digital 2004**
NEC Birmingham.
Screen and digital printing.
www.screen-digital.co.uk

**March 18-24**
**CeBit**, Hanover, Germany.
The world's top IT event.
www.cebit.de

**March 30-April 1**
**Digital Expo**, NEC.
Digital print and services.
www.digitalexpo.co.uk

**March 31-April 2**
**Milia 2004**
Palais des Festivales, Cannes, France.
A global meeting place to discuss industry developments in content and technology trends in Broadband, Mobile and Interactive TV.
www.milia.com

**April 4-5**
**SCORE – Computer Games Conference & Expo**
Business Design Centre, London.
A retail, reseller and dealer event aimed at the consumer PC hardware, accessories, software, games and DVD markets.
www.score-event.co.uk



# Director MX '04 debuts

Macromedia announced Director MX 2004 at Macworld Expo San Francisco this month.

Director is Macromedia's professional-grade tool for building multimedia CDs and DVDs, kiosks and Web or intranet interfaces. Users can employ long video streams, photo-quality images, audio, animation, 3D models, text and Flash content for distribution in many formats.

The product is suited for creating entertainment and educational materials – and the new upgrade offers "massive" speed improvements on previous versions, the company claims.

Like Microsoft Office, Director is as old as the Mac. The first version of the product – then called Videoworks – appeared in 1984. It has since become a mainstay, commanding a claimed 90 per cent market share.

Recent iterations of the product have enhanced its capabilities for building accessibility into projects, such as drag-&-drop behaviours that can be used to 'repurpose' existing content for better accessibility. Other features such as a centralized Property inspector, reusable components and debugging controls help reduce development time.

This version exploits the popular DVD-Video format: multimedia producers can embed, control and play DVD-Video format inside Director-produced content. This matters to Mac users, because it offers developers a way to create enhanced DVDs that offer Mac users the same level of functionality currently-enjoyed by Windows PCs – which Mac users haven't had before. Supported features include the ability to set-up trigger events during DVD playback; DVD navigation tools with custom user-interfaces; and letting users of Director-produced enhanced DVDs choose what and when of a DVD they wish to playback. The feature can also create Web-enabled experiences, in which additional content such as movie scripts or storyboards are synchronized with DVD playback.

The company has focused on integration making the interface the same across its products. Director carries a subset of components for creating Flash content within itself.

Provided Flash MX 2004 and Fireworks MX 2004 are installed, users can click a Flash file and edit that in Flash MX, with the resulting changes saved and re-imported into Director. One click launches Fireworks MX 2004 in Optimization mode.

The product also offers wide support for a swathe of media types (QuickTime, Windows Media, AVI and RealVideo) , and its built-in runtime engine offers consistent playback on Mac and Windows, Macromedia says.

Another massive improvement in this version exists: Macromedia has made Director capable of authoring for both platforms from one, so a Mac user can create content for PCs and for Macs on one machine, as PC users can for Macs (though PC users cannot author content for OS 9, Macs can author for Windows, OS X and OS 9) The Author Once button lets users publish content to both platforms; the application also lets users create projects as stand-alone programs or Web-based Shockwave content.

Two programming languages are supported in Director: JavaScript and Macromedia's own scripting language, Lingo.

The product's 3D support make it possible to import textures and animations form other 3D applications. Flash MX files bought into Director projects offer instant performance improvements between 15-70 per cent, the company claims.

Developers also benefit from Macromedia's removal of the need to give absolute names on sprites. In the past these names were fixed, but opening this feature up lets developers build projects more quickly, Macromedia says.

The company has tweaked the product to ensure that projects can harness its server-based solutions such as ColdFusion MX and Macromedia Flash Communications Server MX, meaning developers can anticipate creating distance-learning content, multi-user games and more.

Mac and Windows versions of the software are available. Minimum system requirements are: 500MHz Power Mac G3; Mac OS X 10.2.6; 128MB RAM; 800-x-600-pixel display; 100MB hard-drive space.

Director MX 2004 will cost £959, upgrade price will be £319. Educational pricing is £369. Prices exclude VAT. The product ships in the US in February, in Europe soon after.

**Jonny Evans** **MW**

## Toast 6.0 with Jam ships

**At Macworld Expo Roxio showcased Toast 6.0 with Jam – its tool for arranging and mastering pro audio-CDs on Macs. This iteration adds DVD authoring to the mix. It ships with pro audio application, Peak Express, which lets users edit and enhance files and soundtracks for iMovies. It has a Hollywood-standard Dolby Digital Encoder for DVD authoring. Toast with Jam also offers: CD Spin Doctor 2 for digitizing LPs; Deja Vu backup software; and Discus Re labelling software. Advanced users can exploit the software to create Red Book-compliant audio CDs, which can be dispatched to pressing plants for reproduction. It offers crossfades between tracks, and the capacity to set the gain for each channel of the track. It integrates with Apple's iLife applications. The product ships in March. Pricing was unavailable at press time.**

## FCE 2 launched

**Version 2 of Final Cut Express – Apple's mid-range video-editing product – was launched at Macworld Expo.**

**Final Cut Express 2 is based on Final Cut Pro. It is optimized for Panther, and features RT Extreme for real-time compositing and effects. FCP 2 offers an improved user interface, new real-time colour-correction tools, and improved audio-editing tools. The colour-correction tools let users adjust and correct colour balance between shots, and create colour effects in real-time.**

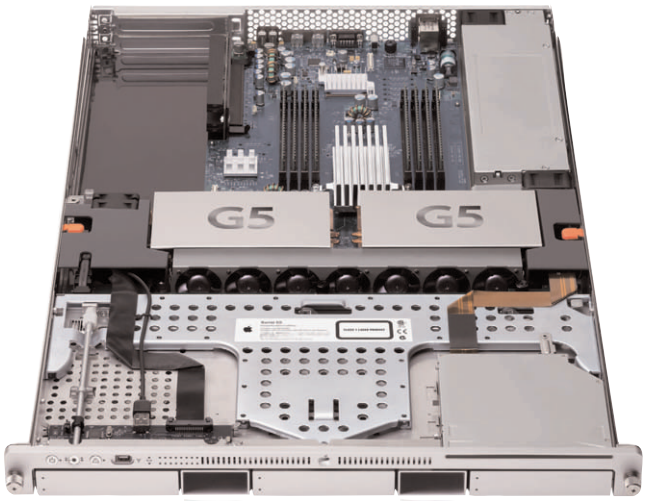
**Apple's vice president of applications marketing Rob Schoeben said: "Final Cut Express 2 is truly professional video editing for everyone".**

**Audio features include: multitrack audio support; real-time volume and audio filter adjustment; solo and mute controls in the timeline for auditioning individual tracks; and scoring markers for using with Soundtrack (to which projects created in Express can be exported). The capture tool now automatically captures across time-code breaks.**

**Additional features include real-time transitions and video layers and the ability to composite up to five simultaneous digital-video streams.**

**Final Cut Express 2 is available now, and costs £199. Final Cut Express owners can upgrade for £69. System requirements include: Mac OS X 10.2.5, a 350MHz G4 processor, and at least 384MB RAM.**

# Servers charge ahead




Apple introduced the Xserve G5, and freshened-up its Xserve RAID products at Macworld Expo San Francisco.

Available from February, the 1U rack-mount Xserve G5 includes: a new system-controller with up to 8GB of PC3200 error correcting code (ECC) memory; three hot-plug Serial ATA drive modules with up to 750GB of storage; optional internal hardware RAID; dual PCI-X slots; supporting 133MHz PCI-X cards with over 1GBps of throughput; and dual on-board Gigabit Ethernet for high-performance networking.

It ships with either single or dual 2.0GHz PowerPC G5 processors, and its front-side processor bus runs at up to 1.0GHz. All bar one ship with an unlimited client-licence version of Mac OS X 10.3 Server.

The oft-reported heat-generating nature of the G5 processor has been solved in Xserve by use of a copper heat sink and eight airflow fans. Xserve holds over 30 sensors to monitor critical system functions, with eight watching the heat.

Apple's improved set-up and remote-management software work with its new Server Monitor software to watch key subsystems and collect data from Xserve's sensor.

A new memory standard – Error Correction Code (ECC) RAM – debuts in these products. ECC memory prevents crashes due to memory errors.

Three standard Xserves will be available: the 2.0GHz G5 Xserve offers 512MB RAM and costs £2,399; the dual 2.0GHz G5 model has 1GB RAM and is £3,199; and the dual-2.0 GHz G5 cluster-optimized Xserve carries 512MB RAM, and offers a ten-client license of Mac OS X Server for £2,399.

All ship with a single 80GB Apple Drive Module, and offer FireWire 800 and USB 2.0 connectivity, and dual-Gigabit Ethernet. Prices include VAT.

Apple also announced a new cross-platform-capable Xserve RAID. This 3U rack storage system offers up to 3.5TB of storage. All new models offer dual independent RAID-controllers, with 128MB cache per controller. Apple announced industry standard Small Form-factor Pluggable (SFP) connectors, and announced support for Xserve RAID from 11 companies, including Microsoft, Veritas and Red Hat.

Xserve RAID supports up to 14 independent ATA/100 drive channels, and its dual independent-RAID controllers offer sustained throughput of over 200Mbps – enough for uncompressed 10-bit high-definition video editing using protected RAID level 5. It connects to any Xserve or Power Mac using the dual-channel 2GB Apple Fiber Channel PCI Card (£399).

Three configurations are available: a £4,799 model offers four 250GB Apple Drive Modules with 8MB on-drive cache; the £5,999 Xserve RAID ships with seven 250GB modules and 8MB on-drive cache; the £8,799 model carries 14 250GB Modules and 8MB on-drive cache. **MW**

**Jonny Evans**

# iPod battery insurance relief

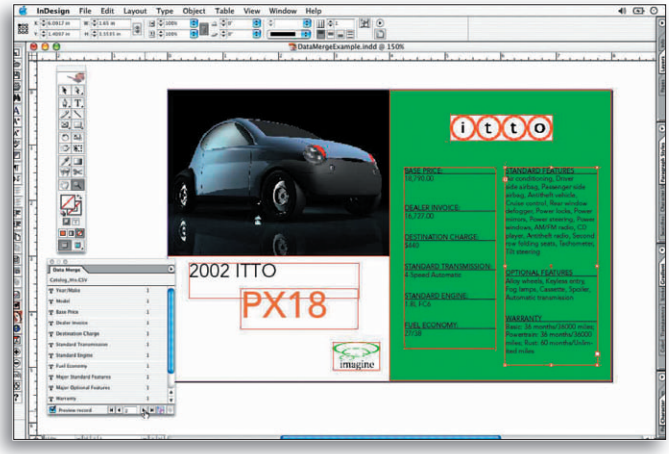
Apple Europe has confirmed that it will offer Europe's iPod owners battery replacement and AppleCare packages "soon", following its move to do so in the US last year. Online campaigners have criticised the usable life of Apple's music player, complaining that its battery lasts just 18 months. This allegation is open to question, but Apple is responding to meet its users' needs, the company's moves suggest.

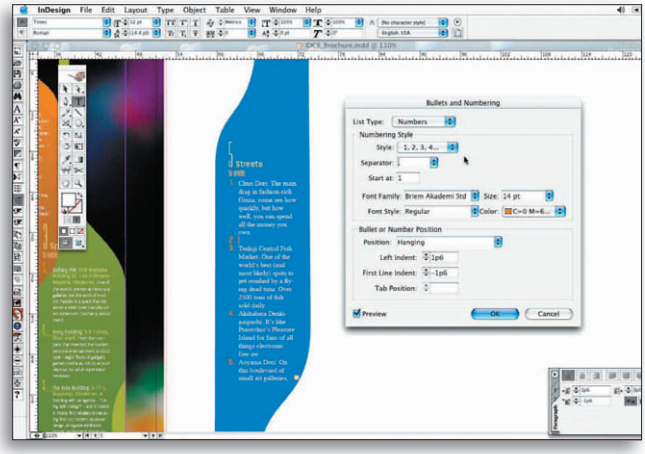
Apple's European PR manager Alan Hely exclusively told Macworld: "The iPod Out-of-Warranty Battery Replacement Program recently launched in the US will soon be launched in Europe. So too will AppleCare for iPod." The move means readers who bought an iPod last Christmas can protect their music players.

UK and European iPod owners will be able to use the battery replacement service "should they experience a depleted battery".

As with any Apple Protection Plan, AppleCare for iPod will be available for iPod customers within their one-year limited warranty. This means "customers can protect their iPod by buying AppleCare for iPod at a later time when it becomes available in Europe," Hely said.

European pricing has not yet been announced. **MW**



# CS subsumes PageMaker

Adobe has ended development on its once market-leading desktop publishing application, PageMaker, but has introduced the InDesign CS PageMaker Edition product to fill the gap. It has abandoned Mac OS 9 support in this release.

InDesign CS PageMaker Edition consists of InDesign CS along with a set of new plug-ins based on popular PageMaker features, such as an easy-to-use template browser, and more than 80 professional pre-built document templates. The product also offers comprehensive training materials to help existing PageMaker users upgrade to Adobe's next generation DTP software. These materials include video materials and an online help system.

The included plug-ins offer a range of handy features that replicate those found in PageMaker, which continues to be widely used in some larger corporate organizations. It's thought that Adobe hopes to use the release to help expand InDesign CS marketshare – and to popularize it among business users at the expense of QuarkXPress.

One plug-in, the PageMaker 6.0 Publication Converter, converts PageMaker 6.0 documents and templates into InDesign CS format, and is able to fix some damaged PageMaker files. This extends the conversion capability of InDesign CS, which already opens PageMaker 6.5-7 and XPress 3.3-4.x documents. To make migration to InDesign easy for PageMaker users, Adobe has made it possible for them to reset InDesign's keyboard shortcuts to match those they use in PageMaker.

The InBooklet Special Edition plug-in for document imposition automatically rearrange pages at print time into an imposition with complete control over margins, gaps, bleeds, creep and crossover traps.

It automates bullets and numbering, allowing users to create and style custom-list settings in paragraph styles that can be applied at will.

Additional features include a Story Editor, context-sensitive access to options for styling text, unlimited undo/redo, table creation tools, editable drop shadows and other transparency effects.

Mac users require at least a PowerPC G3, Mac OS X 10.2, 128MB RAM and a CD-ROM drive. The Adobe PageMaker Plug-in pack costs £47, while InDesign CS PageMaker edition costs £340 (both prices inc. VAT). **MW**

**Jonny Evans**

## Broadband Voice

**BT has launched its Broadband Voice package, offering a consumer Voice over Internet Protocol service to cable broadband users.**

**The company claims its service lets users save up to 57 per cent on calls to mobiles, and up to 25 per cent on UK daytime calls. Using an adaptor that connects the phone and cable line, customers can simply plug into the service, with no need to reconnect their line to BT.**

**The company is deliberately launching the service in areas specifically served by Telewest and NTL customers.**

www.bt.com/broadbandvoice

## International online film fest

**Apple is planning a pilot run of an international online film-festival next year, according to the San Diego Screenwriter's Association (SDSA).**

**This follows a joint Apple/American Academy of Arts announcement of a new program for student filmmakers on November 7 – the Red-Eye competition. This will see teams given a short screenplay written by a Hollywood screenwriter, which they must cast, shoot, edit, score and then deliver a finished movie within 24 hours.**

**When it announced the appearance of award-winning director/producer Marc Anthony Massimei of MAPresents, and a public showing of his move, Purgatory, at a meeting in early December, SDSA said: "This is a short film Marc directed and produced for Apple Computer's pilot run of the online film festival tentatively scheduled to debut internationally in early 2004 at Apple.com."**

**Red-Eye project co-ordinators Ross Kallen and Dan Senstock came up with the idea, along with other Apple Distinguished Educators. Kallen said: "With the ongoing convergence of film and digital technology, and the ability of the Internet to enable students on a global level to participate simultaneously, we're able to push the envelope of digital arts education by extending both its reach and ultimate output.**

**The November 7 pilot was intended to demonstrate the viability of the extended international event that's scheduled to begin in early 2004. The full-strength movie-making competition will feature four separate themed categories each year: narrative, documentary, experimental and public service announcement. The initial pilot ran with selected student teams from schools across the US, the script for which (Rude Awake) was written by Michael Steven Gregory.**

**Jonny Evans**

■ **1985**
The year Aldus introduced PageMaker for Mac, and desktop publishing was born.

■ **1987**
The year Quark introduced QuarkXPress.

Russell Preston Brown discusses John Warnock, the

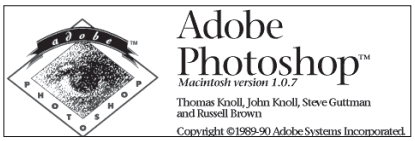
# Photoshop's father Brown

**Macworld's JONNY EVANS talks with Russell Preston Brown – one of Photoshop's founding fathers.**

Russell Preston Brown has been a creative force at Adobe for the past 18 years. Brown was instrumental in the development of Photoshop 1.0, working with original developers Thomas and John Knoll. Brown – along with Steve Guttman – is one of just four names mentioned on Photoshop 1.0's splash screen (see below). Brown's journey began when the product launched, and he demonstrated the image editor worldwide to boost its acceptance.

But Brown is no salesman: "I want to inspire users. I have a side of me that wants to be creative. I'm not worried about sales – other people do that. I worry about energizing the design market.

John Warnock and Charles Geschke founded Adobe in 1982. "John Warnock let me in," said Brown.


Adobe Photoshop™
Macintosh version 1.0.7
Thomas Knoll, John Knoll, Steve Guttman and Russell Brown
Copyright ©1989-90 Adobe Systems Incorporated.

*Version 0.87 tool bar*

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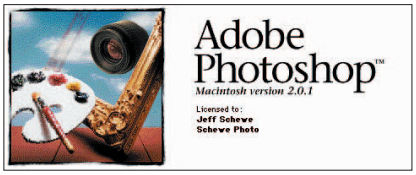

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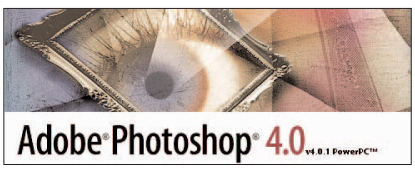
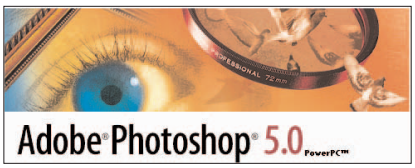



"He's an artist and a painter himself. I get to go out and hear from the users, bring ideas from them directly back to the programmers to try. That's my role: to inspire ideas and get them out there."

He added: "The creative spirit of the company founders gave them a goal to come up with something that made printing easy. Their enthusiasm for innovation and ideas was enormous, and catching. Yeah, that's it. That was the fire, the crazy thing. John's vision of graphics, text and images came together to form desktop publishing.

"He got the text with PostScript; he got graphics with the introduction of Illustrator, because his wife needed that technology as a graphics designer.

"You have to blame it all on John. It was his creative energy that put us where we are today."

There have been many reports claiming Adobe's loyalty to the Mac is wavering, but Brown dismissed these as "driftings" limited to the video market. "If the Mac were to go away we'd be in big trouble."

## Committed to Mac

"The platform generates enormous revenues, and we'd be insane to leave it. We are committed to it, to graphic designers. That's my job," he smiled. "To keep reminding graphic designers that we love them.

"They sometimes think we love photographers more than graphic designers, but that's not true. Never fear, we are here."

His Web site (www.russellbrown.com) offers the tiniest taste of his character – or should that be characters? Whether wearing a comedy wig or dressed as James Bond, he's an anarchic creative artist made good.

These days Brown spends his time at Adobe looking to fill the gaps between software and customer needs: "Everyone is involved, but if I see a problem and can fix it, I do."

As a teacher Brown plays with different ways to get information across: "I get into theme for a year – this year it's James Bond – and I build up everything for a crazy yearly art event I run that puts 100 art directors in one room. I team up with Apple, and put 100 Macs in that room and run a four-day hands-on class for designers. It's a crazy mix: 60 per cent learning and 40 per cent fun."

**'I want to inspire users. I have a side of me that wants to be creative. I'm not worried about sales – other people do that. I worry about energizing the design market'**

This echoes Adobe's first Photoshop Invitational event in 1990, aimed at persuading designers to use computers for art. Famed English artist David Hockney was there.

Brown said: "If we can get the creative ideas out there people get excited and start doing things. So people will go out and buy Photoshop. It's a sly routine: show them something brilliant, and maybe they'll copy it. That's what I want to show them."

He added: "You have to admit that one person with a paintbrush can probably be more creative than a thousand people within a building. A painter can take whatever decisions he wants. I think the Photoshop team is enormously creative. There is controlled creativity here at Adobe

"Sure there have been some changes. The hallways are a bit longer, for one. But there's still enough smart people within Adobe who'll say if something is good or bad, and John Warnock is still part of the board of directors – if he doesn't like something, he'll say so.

"I remember the days when I would call Thomas Knoll and say that it would be nice if Photoshop could do this or that, and the very next day there it was.

"These days it's different. We have a team, but there's so many things we'd like to add, we can't put them all in. Creativity is there hidden behind the doors, active and with more still to come."

Brown added: "When you get 38 people in one room like we were in the beginning, everything is visible



Macworld.co.uk For the information as it happens visit Macworld Online Daily News (www.macworld.co.uk)

# Mac market and the future for Photoshop CS

– you know everyone's name. I guess some of that is lost now, as you don't know everybody's name at Adobe, but you do know each other's particular group. The energy relies on each group coming together to form the whole.

"I guess it's kind of like Creative Suite (CS): the energy in each of the programs comes together to form the whole."

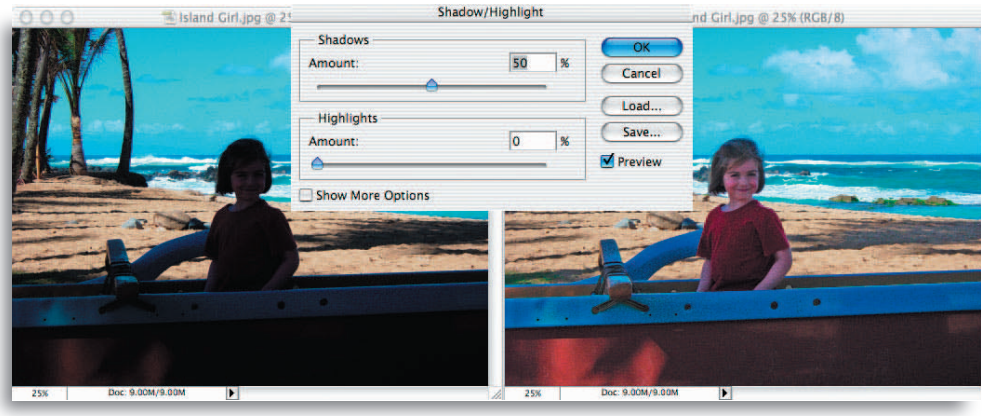
Brown believes the vision of Adobe's founders continues to affect the creative world: "Movie-making friends of mine in California say that every movie we know of has been touched by Photoshop or After Effects. It goes back to those guys, and carries on today."

Brown and his friends and colleagues managed to revolutionize the publishing world – but not every move was obvious: "At the time I'd ask 'What the heck are we doing that for?' 'What the heck is this?' 'Who'd have the vision for something called Acrobat?'

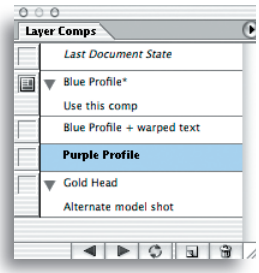
From the outset Brown's focus was on Photoshop: "There have been so many big challenges with Photoshop. One is wanting to put too many good ideas into a version. Although customers want them you just can't get them all in. Which ones do you put in? Which do you hold back?"

The biggest advantage is the team at Adobe, says Brown: "There's some incredibly talented guys and girls on the team. Terribly creative. Energy, energy, energy. They come out with incredible things."

One less well-known Photoshop feature is History Tracking. Brown explains this was inspired by the needs of law-enforcement agencies who wanted to record everything done to an image to protect it as evidence. "I was blind to the amount being done in Photoshop for police work. Because I'm only ever talking with creatives all these other hidden worlds that are working with Photoshop amaze me. The application is also being used for various kinds of medical imaging."




***Feature perfect***
*Shadows/Highlights (above) and the much-lauded Layer Comps are two key new features in Photoshop CS*




## G5s lauded

Brown shifted his sights back to Macs saying: "You want to put a G5 through its paces, try maxing-out Lens Blur and watch it move on a G5 – but don't try that on a low-end Mac. G5s are really nice on those intensive filters.

"I wish I had a Power Mac G5. I'm trying to get Apple to give me one, but they won't do it. Aren't they evil?"

Of Photoshop's future, Brown said: "What's next is incredible – creative ideas we didn't know we needed. It's what I see each time I meet the team – things I didn't know we needed."

The Healing Brush is a case in point. "I thought the Clone tool was all I would ever need, until I stepped into the programmer's office and saw the Healing Brush.

"I haven't visited that office lately, but you can always tell when they are buzzing around and brewing their new ideas.

"We always think we've done everything; but it always turns out that we haven't," he said. "There's always something more to come," Brown smiled. **MW**

**Jonny Evans**

■ Russell Preston Brown's new book is The Photoshop Show (Adobe Press and Peachpit; £26.99: ISBN 032120042X). It offers a series of easy to understand yet visually stimulating exercises.

# CS 'will tilt XPress battle our way'

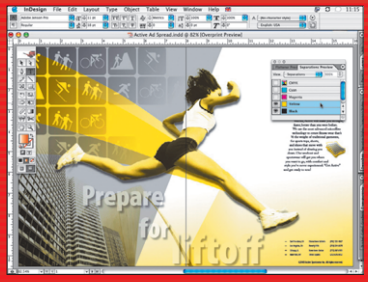
**Adobe UK marketing director Mark Floisand says that Adobe's Creative Suite might be a key factor in the battle for market share between InDesign and QuarkXPress.**

**He said: "We're getting strong feedback that customers really like what's in CS. According to Romtek market data research we have been outselling XPress for the past 15 months."**

**Floisand continued: "Success for either DTP application depends on their adoption among small and large companies. Clearly the switch-over for large creative houses and publishers is a more considered purchase. It's a much larger investment, and the deadline pressure driving such organizations means all the upgrades must be made in parallel. Training time is also part of the process for larger houses."**

**Floisand confirmed that Adobe has been working with larger organizations, who have been testing InDesign. "The pilots we have put in place have been going very well, and we are seeing commitments to large-volume purchases. In the next 3-6 months we are going to see significant licensing deals for Creative Suite.**

**"From an Adobe standpoint we've been very cognisant of the hurdles people must cross to move to InDesign. We've prepared migration packs, training and support material, and have been working with print service providers to help them use InDesign. We are in a different position now than a year ago, and that's giving publishers the confidence to migrate."**




**He added: "The past two years have been pretty hard. There's a cost-cutting climate in which people must work harder and be more productive in an environment that's also seeing declining advertising revenues. The notion of efficiency in publishing has driven investment in the market. These business pressures continue, at least in the near-term, so costs and productivity continue to motivate the publishing industry."**

**Floisand stressed that for many industries, success depends on protecting intellectual property. You see talented Russian software developers moving to the US because they cannot realize their ideas in their own country because it lacks copyright protection." MW**

**Jonny Evans**

# Unreal 04 storms Macs

Destineer's MacSoft unit will publish Unreal Tournament 2004 for the Mac this year – and hopes to be demonstrating an early build of the product at Macworld Expo in January 2004.

The developer of the Windows version of the game was Epic Games. Epic programmer Mark Rein said: "We've been working on the Mac version of Unreal Tournament 2004 right alongside the Windows version. Mac users should get a nice surprise when the official ship dates are announced."

MacSoft founder Peter Tamte said: "Unreal Tournament 2004 is more proof of Epic's awesome commitment to the Mac platform. It's going to be a thrill going online against both Mac and Windows players when this game ships."

The game will feature land, air and space vehicles of varying sizes along with a dazzling array of weapons, guaranteed for frag-fest action.

The title introduces new arenas and battlefields – 20 new maps, the original 2003 maps and the bonus-pack maps. It also sees the re-introduction of UT 2002's Assault mode, and new races and opponents to play or conquer.

Additional features will include demo recording, so star gamers can record moves. The user interface is customizable, software rendering is supported, and the game supports live chat across local and Internet networks.

Machinima-fans will also enjoy the product's UnrealTV broadcast system, which means hundreds of viewers can log-on to watch rivals fight. Unreal 2003 introduced the capacity to create modifications (mods) of the basic Unreal engine. This led some developers to create Red Orchestra, which replaces the game's futuristic set-up with a World War II game set on Russian front lines.

Because the game ships with the Unreal Tournament 2003 maps built-in, UT 2004 owners will be able to jump onto any 2003 game server to join the action. Unreal Tournament is expected to ship mid-way through the first quarter 2004. **MW**

**Jonny Evans**

***Virtual Unreality***
*Unreal Tournament 2004 for Mac is due to ship in early 2004.*

## Top ten Mac games

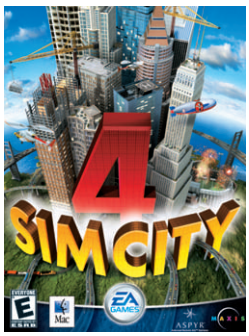
1. Halo
2. Age of Mythology
3. Championship Manager 03/04
4. Indiana Jones and the Emperor's Tomb
5. Sims Superstar
6. Sims Combo
7. Star Trek Elite Force II
8. Sim City 4
9. GhostMaster
10. Family 4 Fun Pack

Source: Softline

## iPoker 2.2

**This poker simulation software for Mac OS X offers 95 types of poker games, and allows users to create customized games. Features include: synthesized dealer's speech calls; smooth animation; a poker-teaching tutorial; jokers and wild cards; and a winnings tracker. The games also allow players to place virtual bets, and can play high, low and high-low split games. A total of 95 game-types are supported. The trial version allows players to try only seven-card stud. Registration unlocks the other 95 games, and costs $30.**

www.ouzts.net




## Landmark title

**Aspyr Media has released its free Landmarks add-on for SimCity 4.**

**It lets SimCity 4 players add real-world architecture to their cities by erecting notable edifices like The Mayflower, Seoul Soccer Stadium, Parthenon, Bradenburg Gate, Capitol Records Building, Arc de Triomphe, Grand Central Station and more. A full version of the game is required, but the download is free.**

## Court gestures

**Freeverse Software has produced ToySight, an innovative new experiment in gesture-based gaming using Apple's iSight camera and a Mac.**

**The company's system is reaching US retail outlets today. The company has also introduced its first dozen interactive games and toys for use in both single- and two-player modes.**

**The innovation is in the controls: instead of using a joystick, mouse or keyboard, players move about in front of an iSight – or other FireWire camera – to control the action, in the style of sci-fi movie Minority Report. Players are superimposed transparently onto the game screen, and must use arm and hand motions to play the games.**

**The first 12 gesture-controlled games include puzzle, adventure, reaction, and god-games. Two-player titles include Submarines, Toy Wars, and Tennis Xtreme.**

www.freeverse.com

## Business briefs

- Apple has appointed James Lawrence to its board. Lawrence is executive vice president and chief financial officer of General Mills. Yale-educated Lawrence is a long-term Mac user.
- A legal challenge threatening manufacturers of CD-authoring software has been launched by Optima Technology, which has sued Roxio for infringing its 1997 patent for burning CDs. Optima seeks an injunction against Roxio with damages.
- Coca-Cola is to launch a UK music-download service with the OD2 network.
- Internet shopping reached an all-time high in November, with Britain's 16 million online shoppers spending £1.17bn – almost twice as much as this time last year, according to IMRG.
- Adobe has appointed Solectron CEO Mike Cannon as its ninth board member.
- Computer Warehouse Group has acquired Holden's as part of its strategy to extend the education and audio/visual elements of its business.
- Nielsen/NetRatings reports that 9.35 million Europeans used the Kazaa peer-to-peer file-swapping network in October, while 8.24 million Americans did the same.
- Roxio expects Napster to accrue $3.5 million revenues for its December 2003 quarter.
- Canada is to tax MP3 players, with the fund split among music-copyright owners to offset revenues lost through file-sharing.
- FireWire bridge manufacturer Oxford Semiconductor is opening an office in Taiwan to expand its presence in the Far East.
- Microsoft is to phase-out distribution its older products containing its own version of Java Microsoft Virtual Machine following its legal settlement with Sun.

# '03 *was* year of notebook

Apple will report its first-quarter 2004 results on January 14 in a quarter that industry insiders agree is critical to assess its success, as it includes both the US Thanksgiving and European Christmas shopping periods.

The quarter – the first in which Apple's new Power Mac G5 line-up shipped in quantity – is seen as a sign of what's to come across the IT sector. Analyst firm IDC opened December predicting computer sales would reach record levels in the closing weeks of 2003 and across 2004, driven by strong consumer demand and aggressive pricing.

Apple's prediction that 2003 would be "the year of the notebook" was borne out by the company's Form 10-K Annual Report, which it filed recently. This is the audited document required by the SEC that is sent to shareholders at the end of each fiscal year. The document reports the financial results for the year, and includes comments on the outlook for the future. It states that several factors have "contributed favourably" to net sales during 2003. These factors include net sales growth in the retail segment and the year-on-year increase in iPod sales.

Although total Macintosh unit sales were down 3 per cent in 2003, Apple says portable sales were "relatively strong due to the 247,000-unit increase in PowerBook sales". It attributes the increase in PowerBook sales to the success of the new 12-inch, 15-inch and 17-inch models. Portable systems represented 42 per cent of all Mac systems sold in 2003 versus 33 per cent in 2002, and 31 per cent in 2001. IDC predicts 11.4 per cent growth in global notebook sales in 2003 and 2004. Consumers remain the driver for sales.

Net Apple sales in Europe increased 5 per cent during 2003 compared to 2002 – but sales declined by 5 per cent during the same period.

Like the US, Europe experienced weakened demand for Power Macs, iMac and iBooks in 2003, partially offset by strong demand for PowerBooks. Europe realized increased sales of peripherals, software, and service – primarily attributable to higher sales of iPods, accessories, says Apple.

Apple says that the decline in unit sales of Power Macs is "representative of the decline of Power Mac sales experienced by the company during recent years,

and is also believed to be attributable to delays in purchasing pending the release of the Power Mac G5". This trend "reversed" in the fourth quarter of 2003 following the introduction of the Power Mac G5. The company suggests that declining Power Mac sales over the past several years "reflects the shift in sales to portable systems, particularly PowerBooks". It also blames the "weak economic conditions over the past several years" that are having a "pronounced negative impact on its professional and creative customers".

"We're seeing a dramatic shift from desktop to notebook buying," said Roger Kay, vice president of client computing at IDC. "We expect this trend to continue for several more years."

Net sales of Apple software increased $55 million, or 18 per cent, during 2003. The increase was due to the introduction of Final Cut Express, iLife, and Keynote, as well as being driven by higher sales of software related to recent acquisitions, including PowerSchool and Emagic, says Apple.

The company also experienced increased net sales associated with iTunes Music Store and increased sales of Apple's .Mac Internet service. **MW**

**Karen Haslam**

# Adobe results hint at recovery

Adobe saw 22 per cent year-on-year revenue growth for 2003, the company has confirmed – exceeding its own expectations, and suggesting a general recovery in the creative and business markets.

The company achieved record revenue of $358.6 million, in contrast to the $319.1 million reported in the third quarter 2003. It had anticipated fourth-quarter revenues of between $330-350 million.

Net income was $83.3 million for the fourth quarter of fiscal 2003, compared to $64.5 million in the third quarter of fiscal 2003. Year-on-year, net income grew by 108 per cent.

Adobe president and CEO Bruce Chizen said: "Adobe's record Q4 revenue is the result of outstanding performance, as well as Adobe's increasing relevance as a platform provider across our customer segments. During fiscal 2003, we expanded our commitment to the creative professional, extended our reach into the digital imaging and video markets, and clearly defined our vision for intelligent document solutions for our growing base of enterprise customers.

"Given the positive momentum we established during the year, we're optimistic about our opportunities for continued growth in fiscal 2004 and we are reaffirming our annual financial targets."

Adobe's record quarter was driven by the success of its Acrobat and creative products. The company is aiming at first-quarter 2004 revenues of $360-$380 million.

Adobe achieved 2003 revenue of $1.295 billion, compared to $1.165 billion in fiscal 2002. **MW**

# Maya gets Tooled-up

Alias has unveiled six new Learning Tools aimed at games developers, film-and-video producers, creative professionals, and 3D beginners.

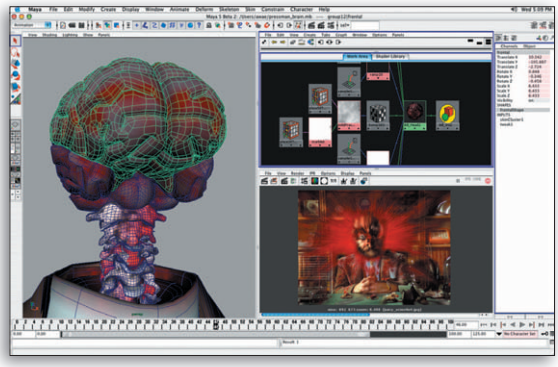
According to Alias, the tools "combine industry knowledge from industry professionals at Weta Digital, Sony Pictures Imageworks and LucasArts".

For amateur 3D animators there are two new Maya Beginners Guide DVD titles: Maya 5 Beginner's Guide|Rendering; and Maya 5 Beginner's Guide|Dynamics (both £24).

For games developers, there are two new DVD titles, both from LucasArts game development experts: Maya Techniques|Character Articulation for Games and Maya Techniques|Developing an Environment Toolkit (both £90).

For the film and production industries Alias has introduced Maya Techniques|Flow Workflows (£90), which includes techniques and footage from Weta Digital, the production company of Lord of the Rings, and Maya Techniques|Previsualisation (£90).

**01494 441 273**



***Something for everyone***
*Alias' new learning tools cater for game-designers, 3D artists, and filmmakers.*

## Mirage animation for X

Bauhaus Software has launched Mirage for Mac OS X. This is the first Mac release of the company's software for animated graphics and special-effects creation.

The £628 application integrates real-time video paint, animation, and effects tools such as 2D particles, volumetric lights, and other animatable effects. It also sports features such as animated paint, natural-media drawing tools, keying with spill suppression, matte controls, colour correction, histogram controls, and multi-point pixel-tracking and -stabilization. Bauhaus says motion graphics can be created, animated and deployed, and video can be manipulated and enhanced with the application.

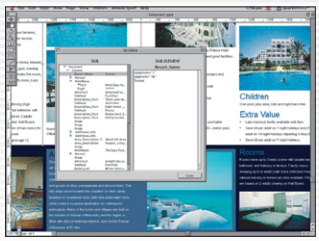
**www.tvpaint.fr**

## XPress XML-export app released

Easypress Technologies' XML export tool for QuarkXPress, Atomik Xport Personal Edition, is available now for £816.

Features include: export image data; specify the order in which the content is exported from XPress; identify content at both paragraph and character level; export style sheets and colour definitions; batch-process folders of XPress documents into XML; auto Document Type Definition (DTD) generation; and user-configurable specifications of what content to export and the level of granularity required. The Personal Edition supports UTF-8, UTF-16, ISO-8859 and ASCII/Unicode.

**020 7608 6690**



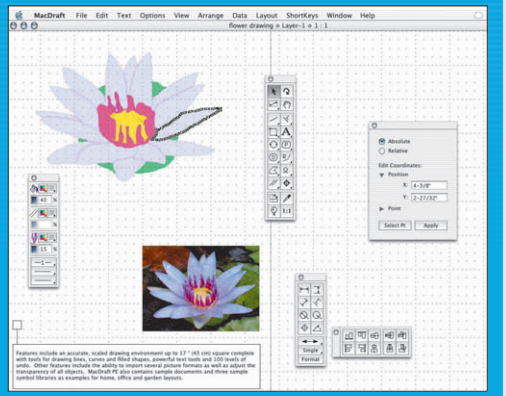
## Low-cost tech-drawing tool

Microspot has announced MacDraft Personal Edition (PE), a £95 technical drawing and design application with features from MacDraft 5.5 – Quartz Edition.

MacDraft PE has been developed exclusively for OS X, and offers an accurate, scaled drawing environment up to 43cm (17-inch) square, complete with tools for drawing lines, curves, filled shapes and text tools. Other features include the ability to import PDF, PICT, TIFF, and JPEG files; adjust the transparency of objects; export MacDraft PE drawings as PDF's and other picture formats.

MacDraft PE also contains sample documents and three symbol libraries.

**01622 687 771**



### Lap it up

The Boa.XL is an £89 laptop backpack designed by BOOQ for the 17-inch PowerBook. "Months of development" have gone into the shoulder strap and unique back surfacing, the company says. A weather-protected iPod pocket lined with non-scratch fabrics is also included.

Everything-iPod, 0870 350 8024

### Which blur project

TrueBlur is a Photoshop plug-in from FixerLabs that uses EXIF information from digital cameras to generate an accurate model of the lens optics. FixerLabs says this gives a more-accurate model of optical blur than Gaussian blur does. Users can also add noise. The plug-in wo with 8- and 16-bit images and costs £19.

01923 226 655

### Shortcut app updated

Rampell Software has updated FunKeys X for OS X. The £11 keyboard shortcut tool lets use assign any keystroke to open Web sites, type text, open applications and files, run AppleScripts and perform pres commands. FunKeys X can be to only recognize shortcuts in certain applications, so it won' interfere with other applicatio

www.rampellsoft.com

### Safe surfing for kids

Kids Browser is a £16 Web browser designed for children and powered by Safari. It allow parents to preset authorized W pages for children to visit and hides the Apple Dock, menus a Mac Finder so kids can't get in the Mac OS X system.

www.adnx.com

### Convert operations

PDF2Office 1.0, a PDF docume conversion and data-extraction tool, is shipping. It converts PD documents into editable Word, RTF, Works, and HTML files – re-creating the original constru of the document, including styles, images, tables, headers footers, footnotes, and column and sections. A single-user license costs £56.

www.recosoft.com

*continues page 36*

## Apple updates

**Panther Pro App Runtime 1.5.1** is recommended for users of Final Cut Pro, LiveType, Soundtrack, Cinema Tools, Compressor, and DVD Studio Pro. Apple claims the update improves interface appearance and reliability. The update is necessary to receive future updates for these applications.

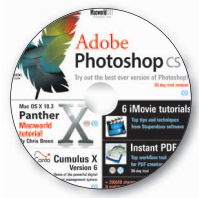
Apple has released **Power Mac G5 Firmware Update 5.1.4**. It provides changes for initializing and running a Power Mac G5, offers performance improvements for some PCI-X configurations, patches a security hole, and improves fan behavior in Open Firmware.

Panther and Jaguar versions of a **security update** have been posted. It updates Safari to prevent unauthorized access to a user's cookies.

Apple has updated **Soundtrack to version 1.1**. The update improves compatibility with Panther, and lets it harness "new features" in the new OS.

## Third-party updates

**EasyBatchPhoto 1.3.6** has added on-the-fly file renaming to the batch image processor. It is now possible to add a prefix or suffix to file names, or number output files sequentially.




**_Finder 3.1** is a anther-only version of CocoaTech's file browser for Mac OS X. It offers new ompression options d display izations. Memory usage and performance has also been improved.

**Pseudo_1.2.3** is a drag-&-drop application lets allows users launchapplications in OS X as system administrator or root. The update includes fixes for Jaguar and notification of bad passwords.

Bare Bones Software has updated **TextWrangler 1.5**. It offers a number of fixes as well as AppleScript support, built-in support for syntax coloring, and function navigation of files in various programming languages including Java, Perl, and Unix shell script.

# New Optio LF a camera

Pentax has extended its range with the Optio 33LF – a 3.2-megapixel camera with a 3x optical zoom (equivalent to a 38-114mm lens). The camera is 108mm wide and weighs 175g.

The 33LF features a swivelling 1.6-inch LCD monitor that moves through 180 degrees horizontally and 270 degrees vertically, and a macro mode that enables composition of a photograph 10cm from the subject. Users can customize frequently useds functions – allocating them to the four-way controller. The camera can record 30-second, 320-x-240-pixel movie files at 16 frames per second, although without sound.

The camera also features seven shooting modes including landscape, portrait and snow-&-surf. A night-scene mode enables shooting in low-light conditions, Pentax says. Users can also select black-&-white, sepia, red, blue, and green digital filters, and shoot images entirely in black-&-white except for selected red, green, or blue areas.

The £229 camera features 12MB of built-in memory and is compatible with SD and MultiMedia cards.

**01753 792 731**

***Snap-happy***
*The Optio 33LF's mode settings and macro capability make it versatile enough to use in most photographic situations.*

# Mid-range Finecam debuts

Kyocera's £299 Finecam S3R features 3.17 megapixels, and incorporates a high-resolution optical 3x zoom lens. According to the company, the lens provides a projected resolution of 200 lines/mm at the centre of the image from a focal length of 7.3mm (wide-angle) to 21.9mm (telephoto). These focal lengths correspond to approximately 35-105mm for 35mm cameras.

The S3R features a full range of functions, including movie recording with audio at 30 frames per second (fps), high-speed consecutive shooting at approximately 3.1fps, and a macro mode that allows shots of the subject from a minimum of 12cm in all zoom ranges.

Users can select an image to be displayed on the start-up screen, and it's also possible to reduce the size of an image to 320-x-240 pixels or 160-x-120 pixels after it's been taken. Predefined settings include: standard, sport, night view, night view, macro and distant View.

**0118 933 7000**

## Objects of desire

AbsolutVision has released its first series of royalty-free images: Photo Objects. The images are available in low and high resolution, in JPEG and JPEG2000 file formast. Images can be purchased individually, or a subscription option is available for £14 a month or £57 a year.

**www.absolutvision.com**

# Six-million pixel cam

The Fujifilm FinePix F610 is the first compact digital camera to offer six million effective pixels, the company says.

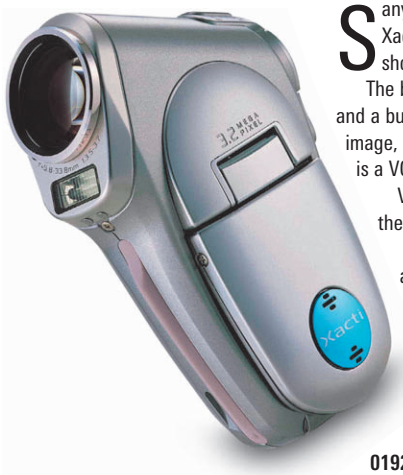
The camera features a 3x optical zoom lens (equivalent to 35-105mm on a 35mm camera); full manual, aperture and shutter priority modes; four special scene modes (Portrait, Sports, Landscape and Night Scene); and two LCD screens. One screen displays camera settings, the other, a 1.8-inch, 134,000 pixel TFT LCD monitor, allows un-impaired viewing of images, Fujifilm says.

The company also claims that the camera is less prone to shake when held one-handed because of its upright format.

The camera features a 1.3-second start-up time; a continuous shooting mode of 3.3fps; continuous AF mode; movie capture at 30fps with sound (640-x-480 pixels); a video-out socket; and PictBridge compatibility for direct printing. It works with an xD-Picture Card and will be available in February. Pricing has yet to be announced.

**020 7586 1477**

# ‘Smallest’ video-cam launched



Sanyo has launched what it claims is the world’s smallest digital movie camera. The £500 Xacti VPC-C1 uses MPEG-4 technology to capture high-quality image and sound, and can shoot still images while recording video at 3.2 megapixels – another first, the company says.

The brushed-silver video camera features a 5.8x optical zoom lens, a 3.2-megapixel CCD, and a built-in 128MB SD memory card that can hold 30 minutes of broadcast-quality moving image, or one-hour VHS quality. The camera records at 30fps in MPEG-4 – resolution is a VGA-size 640-x-480 pixels. It also features a built-in stereo microphone.

Video images are stored in an easy-to-browse format, which Sanyo says enables the user to get to a chosen scene quickly without the need to rewind or fast-forward.

Shots can be edited on the camera, and a multi play facility allows the review of video and still images simultaneously via a slideshow setting. The camera also offers high-resolution playback of video images via an AV-connection to a DVD Recorder or VCR.

Video footage can be stored via DVD-R, hard disk, or conventional VHS cassette tape.

The still camera features five scene modes: sport, portrait, landscape, and nighttime. Five filter functions are also available: cosmetic, slim, monochrome, sepia, and ghosting. A Super Macro mode allows high-quality stills to be captured 2cm from the lens.

**01923 477 124**

# Record digital TV on the Mac

Elgato has launched the EyeTV 300 and EyeTV 400 digital video recorders – both £249. They offer TiVo-like hard-drive recording facilities, letting users watch, record, edit and archive satellite and terrestrial TV on their computer.

They play and record digital television in its native MPEG-2 format, and are the first computer-peripheral digital-video recorders to use FireWire, making it possible to transfer high-quality digital television to the Mac.

The products let users pause, rewind or fast-forward through television, record TV to the Mac’s hard drive, and create an archive of shows. EyeTV can be programmed remotely using the Internet through tvtv – a Web-based electronic programme guide.

The EyeTV 400 receives digital terrestrial TV using a small portable antenna and draws power through the FireWire bus – so notebook users can watch TV while travelling. The EyeTV 300 requires a satellite dish and receiver.

At least a 500MHz G4 processor, a FireWire port, Mac OS X 10.2.8 and 256MB of RAM are required. One hour of recorded TV takes up about 2GB of hard-drive space.

**Computers Unlimited, 020 8200 8282**

# Grand master flash

Transcend’s USB 2.0 JetFlash storage device can achieve a read speed of up to 8MB per second and a write speed of up to 7MB per second. It is available in blue, lilac, champagne and silver. 64MB to 4GB models are available.

The NAND-type Flash drive can be configured into two partitions with different capacities. Password-protected security also features. It also features USB-ZIP and USB-HDD boot-up functions, an LED to indicate the usage status and a mechanical write-protection switch.

A Boot-Up function enables users to make JetFlash into a bootable device, and the USB port powers the drive, so no external power or battery is needed.

JetFlash costs £20 for a 32MB version, £30 for 64MB, £40 for 128MB, £70 for 256MB and £140 for 512MB. A 1GB version is £300, 2GB is £675 and the 4GB version is £1,395.

Orca Logit, 01306 640 700

# Fishy business

The Animals Catalogue from Aflo – one of the leading stock agencies in Japan – is exclusively available from the Nature Picture Library. Prices start from £58 for publishing use and £29 for personal use.

**0117 974 6720.**

## And the beat goes on

Ask The DJ 1.5 is $29 shareware that analyzes beats to perform seamless transitions between tracks. Developer MacMusic claims it cuts un-rhythmic intros and outros, levels volume matches beats and adapts tempo so the music always flows even when cross-fading between tracks. It plays files in MP3, AAC or AIFF format.

www.macmusic.org

## iPod accessories

Higoto has launched two iPod products. The £6 SimpleSpeaker is described by the company as “very small and light stereo loudspeaker that works without batteries”. It connects through the headphone jack. The limited edition iPodSaver protection sleeves feature artwork by Thomas Schostok, and cost £15.

www.higoto.de

## Old iPod, new skin

iSkin has launched a new skin for the iPod. The £24 eXo2 features bevelled button-openings for access to controls, an anti-static agent-coated FireWire port cover and rear heat-release pores. Also included is a removable stainless steel belt clip and a screen protector. It is available in Arctic Sonic (blue), Ebony and Carbon.

Channel Dynamics, 08706 070 054

## Be an Internet DJ

Nicecast lets users broadcast music from Mac OS X “to the far reaches of the globe”, according to developer Rogue Amoeba. For $30, it lets users access their iTunes Music Library via the Internet. It’s also possible to create an Internet radio station – and with the VoiceOver plug-in, users can host a call-in show.

www.rogueamoeba.com/nicecast/

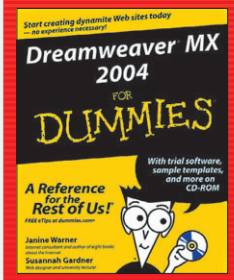
## SiK’s in-car iPod drive

SiK has announced two products for the iPod. The imp is a car charger offering line level audio output for £30. The FireJuice is a multi-mode FireWire power-injector that makes it possible to use bus-powered devices on computers with un-powered FireWire ports. FireJuice is available in both four- and six-pin versions, and costs £39.

Channel Plus, 020 8336 0644

*continues page 38*

## Books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Dreamweaver MX 2004
FOR
DUMMIES
With trial software, sample templates, and more on CD-ROM
A Reference for the Rest of Us!
Janine Warner
Susannah Gardner

### Dreamweaver guide

**Dreamweaver MX 2004 for Dummies (£16) covers all aspects of designing a well-planned site, including co-ordinating the design work; adding graphics; framing pages; formatting text; adding interactivity; working with multimedia files; and building a dynamic site.**
**ISBN: 0764543423**

### Troubleshooting tips

**Mac 911, by Macworld columnist Christopher Breen, will be available from Peachpit Press on January 31. It contains troubleshooting tips and techniques for Mac OS 9 and the latest version of Mac OS X, and includes advice on creating a professional-looking iMovie, setting up a network, and thwarting spam. It will cost £22.99.**
**ISBN: 0321186516**

### Rookies' photo info

**Wiley has also published Shooting and Sharing Digital Photos for Dummies (£9). The book takes first-time digital camera users through setting-up shots and transferring and printing photos.**
**ISBN: 0764543598**

### Database building

**Building Database-Driven Flash Applications (Apress, £35) focuses on how to harness the power of database technology with Macromedia Flash and covers techniques for using Flash presentation capabilities with the back-end databases.**
**ISBN: 1590591100**

# Epson shows new scanner wares

Epson has announced two new scanners. The GT-15000 is a 600dpi, A3 colour scanner that offers 48-bit scanning and a 100-sheet, A4 automatic document feeder – allowing mono scan-speeds of up to 15ppm. An optional A3 15ppm document feeder is also available.

The £1,046 scanner offers automatic document-size detection, and USB 2.0, SCSI and optional FireWire connection methods. It can be networked and can work as a TWAIN driver.

Epson claims the Perfection 4870 Photo Scanner scanner features an optical resolution of 4,800-x-9,600 dpi – "the highest in its class". With the Perfection 4870 Epson says it is: "Challenging the traditional film scanner manufacturers on quality but also on price." Epson also boasts that the Perfection 4870 is "so powerful that the grain of the film can be detected". A Grain Reduction function can be used to blend grain away if required.

The scanner also uses Epson's Digital Ice technology to remove surface defects including dust and scratches from a scanned image. According to Epson, because the technology works from within the scanner during the scanning process, it provides the user with a "scanned image file that improves upon the original print".

It also features an "unrivalled" optical density of 3.8D – enabling the scanner to detect the data in extreme highlight and shadow areas. USB 2.0 and FireWire interfaces are available. The 4870 will be available in February for an estimated price of £399.

**0800 200 546**

# Footage collection released

R/com Networks has announced a new line of high-quality, broadcast-ready, stock footage. The collection integrates with non-linear editing systems including Apple Final Cut Pro. Full buy-out rights are offered for £51 for a complete collection of 60 clips.

**www.rcomnetworks.com**

# New HP all-in-ones

**HP has extended its range of LaserJet multi-function devices with the launch of the 9055 and 9065.**

**Printing, copying and scanning features include a 300,000 page duty cycle, a first copy out time of 3.1 seconds, 55 or 65 pages-per-minute printing and copying for the 9055 and 9065 respectively, 600-x-600dpi print and copy resolution, a duplexer, up to 384MB printer memory, and 320MB copier memory.**

**Optional add-ons include 4,000-sheet input devices for A4 and A3 paper, a 100 sheet output tray, a 2,500-sheet multi-function finisher, or a 3,000-sheet stapler/stacker.**

**The LaserJet 9055 costs £14,441 and the LaserJet 9065 costs £17,247.**

**0870 010 4320**

# Samsung's first colour-laser

The CLP-500 is Samsung's first colour laser printer. The unit – which offers duplex printing as standard – also offers print speeds of five pages per minute (ppm) for colour and 20ppm in monochrome. It carries a 350-sheet capacity as standard – an optional 500-sheet paper tray is also available.

The printer operates at low noise, implementing the company's NO-NOIS (Non Orbiting Noiseless Optic Imaging System) technology. This means the device operates at 48dB, which Samsung claims is the lowest noise level in its class.

Additional features include a 166MHz processor, 64MB RAM, and 1,200dpi resolution. Two configurations are available: the £499 CLP-500 offers a USB 2.0 port, and the networkable CLP-500N (£599) has 10/100 Base TX Ethernet as standard.

Samsung's colour printer product manager Matthew Clark said: "We hope to replicate the success achieved in the mono laser printing market, where Samsung has become the number three printer brand within three years. The launch of the Samsung CLP-500 highlights the fact that Samsung is an increasing force in the market."

**01932 455 000**

What if Apple branched-out into interior design? Or car manufacture? The world would be a much more stylish place.

# Ive done well

It must be a bit quiet in the industrial design department in Cupertino at the moment. It's generally accepted that the G5, Aluminium PowerBooks, the iMacs and so on, are masterpieces of design. The iPod has conquered the world – even PC users can't keep their paws off them. So what next for the design masters?

The G5 is new, so apart from occasional speed hikes and new connectivity options appearing over the next few years I would bet that it is going to remain the same. The blue-&-white G3 and the various G4 designs were variations on a theme – one that lasted for many years. I would expect the G5 will last at least as along, and as the design is so good now, improvements are harder to come by. I guess they could anodise the case if they got bored, but it's pretty much all there already.

The iMac – the computer supermodel – could hardly get any kookier, cute or appealing. Again, over time I'm sure Apple will cram in a G5 processor, and USB 3, or something else that has yet to be invented, but the design is all there. I can't see how it could be more compact, more cool, or more iMaccy. Perhaps I just don't have a designer's eye, but improving on what is generally accepted to be perfection is going to be tough.

The PowerBook range is complete – Apple has every size, with every option, and iBooks fill any gaps in the consumer market. The screens can't get any better, so bar the occasional speed increase – and, of course, the G5 processor migration – there's nothing much on the cards. Even when Apple does get the G5 processor to work in a PowerBook, which is only a matter of time, it will have to fit in the same size PowerBooks and will most likely look pretty similar.

So with designers running around with spare cycles, it seems like a good idea to put them to work on something new. Everybody likes Macs, right? Even PC users wish they could have a computer as cool as the Mac, though they would rarely admit it. I'm sure it would be a different story if they could afford one, and Macs ran Windows, but that's another column. Its superlative design makes Apple a revered brand, even among people that don't have computers. So perhaps Apple should make products that anybody could buy. I don't mean just expanding the range to include Apple-branded printers or scanners – that's been done before. I mean *really* expand the product range into things that have nothing to do with computers.

Jonathan Ive is the best-known industrial designer Britain has, but he's not the only one. James Dyson is also a giant of design, with his insanely expensive vacuum cleaners and tumble dryers. What if Apple designed a tumble dryer? One thing is for sure, it wouldn't be a hideous purple and yellow eyesore; it would be a tumble dryer you would want to show off. It could hardly be any more expensive than the Dyson dryer either, which just shows that people will pay top dollar for great design.

Another example, and potential target market, is refrigerators. People pay huge amounts of money for a Smeg, despite its hilarious name, because it looks beautiful. As far as I know, there's no advantage to having a fridge that looks like it fell out of the fifties, other than it looks cool. If Smeg can do it, why not Apple? It wouldn't even need to be Internet-ready like the LG fridge – no need for gimmicks here, just masterful design. There's no need to stop there either: if you have an Apple-designed a fridge, you'll want to put it in the right environment. I wonder what a kitchen designed by the Apple industrial design team would look like – translucent kettles, aluminium espresso machines, an Apple-designed cheese grater...

Another area begging for Apple design skills is the automotive industry. When I visited the team in Cupertino (just before Steve Jobs returned and locked down the labs) there were members from all kinds of backgrounds, including at least one who had worked at Porsche. It's likely that there are others with enough car design skills to put something together. There are already a couple of cars that sort of say "If Apple designed a car this would be it". The VW Beetle and, to a lesser extent the SmartCar (which I think is more of a Dyson design), are designery cars, and both have options to include an iPod holder. I think a real Apple-designed car would be fantastic. I'm not saying that Apple should actually go into car manufacturing, but cars styled by Bertone or Pininfarina aren't actually built by them. Cars styled by famous names also go for considerably more money. Steve Jobs has always had a soft spot for Porsche, and in some ways wanted Apple to be the Porsche of computers. I think Apple has achieved that – maybe now it's time to be the Porsche of cars.

There's no end to what could be done with the spare cycles in the industrial-design team. There isn't anything that I can think of that wouldn't be made better by the care and thoughtful design the Apple team are so good at. It's the attention to detail that's so impressive: the little things, like the boxes things come in, or the power supplies, that demonstrate the care with which Apple computers are built.

It's like the Shakers, who built their furniture to look as perfect from underneath as from above because God can see from all angles: Apple designs are similarly thought through. I'd be happy to pay more for a TV, or a fridge, or a washing machine with that kind of craftsmanship. MW

**'Steve Jobs has always had a soft spot for Porsche, and in some ways wanted Apple to be the Porsche of computers. I think Apple has achieved that – maybe now it's time to be the Porsche of cars.'**

# Michael Prochak

The hardline US approach to suing individual file-sharers is coming to Europe – but will it make a difference?

# Breaking the law

When some people get themselves into a hole, they keep digging, and when that happens, even a beard doesn't seem to help. For Bush and Blair accidentally finding Saddam Hussein hiding in a hole behind the garden shed was a better Christmas present than accidentally discovering that Santa Claus really does exist and lives happily at the North Pole. As I've probably said before, it's all down to angles, and what you see depends on where you look.

If you don't suffer from Type-3 error messages that refuse access to your email, you may have seen rumours that Internet shopping was particularly lucrative over the holiday period. Yes, I know we've been hearing about the Internet shopping revolution for many years, but if you have any belief in statistics it would seem that over the Christmas holidays online sales figures began to exceed expectations, and have spawned a new breed of carefree consumers who pass like ghosts through throngs of normal shoppers with calm, relaxed smiles after exploiting the calm of cyberspace. Companies like Kelkoo, one of Europe's leading Internet shopping search engines, reported a four-fold increase in business on last Christmas. By the end of December last year total electronic sales in Britain were expected to reach £2 billion.

Apple should be particularly pleased with itself, since of all the electronic gadgetry that was purchased over Christmas the iPod was by far the most popular. Kelkoo claimed that while there was a massive leap in business it was the iPod that led the way by a considerable length. It's encouraging to know that something the same size as a packet of fags that can store 10,000 songs can become the coolest item in our Christmas stockings. The iPod may be just a cleverly designed hard-disk drive, but it still managed to become a cult consumer gift.

While Apple is above-board and legal with its online music, it now appears that British consumers who use their iPods to swap music from other file-sharing networks may find themselves up a Tikriit without a paddle... or perhaps a shovel. The international recording industry group, the IFPI, has stated that lawsuits are now inevitable for anyone downloading music from non-kosher sites. The reason for this hard-nosed approach is that some of the latest figures show that the number of Europeans who use some leading file-sharing networks has overtaken the volume of Americans visiting the network. This follows an announcement made last summer by the Recording Industry Association of America that it will pursue legal action against individuals infringing copyright and offering dodgy music downloads. In a less-than-surgical first strike the organization has already filed lawsuits against 341 Americans. Like Saddam, most gave up without a fight – and over 200 have been settled, with most agreeing to pay a fine of between $1,000 and $3,000.

Considering the fact that iTunes still isn't accessible for European users, you could understand the IFPI's concern. With all those iPods being sold on the Internet and elsewhere, users must be downloading a lot of music from somewhere. The figures from which the IFPI was working show that the number of Europeans using that 'other' music file-sharing network, Kazaa, is soaring. American usage has fallen from around 10 million to 8.2 million since last September, while European usage has been hitting around 9.4 million.

This is an interesting trend, particularly since the Nielsen ratings also indicate that overall American usage has fallen from over 16 million since last March. I suppose that could mean that people have already downloaded all they want, or, that the interest in downloading music was a bit of a novelty, and maybe interest is beginning to wane.

There are serious questions about consumer confidentiality here: how does the RIAA, or any other such organization, get information about who is buying what from where? What with the plethora of data- and consumer-protection acts, it would seem that these groups would have to be breaking a few laws themselves in order to prosecute anyone for downloading without permission. In a litigious country like the US, all these holier-than-thou recording industry bodies who claim to be protecting performers' rights could find themselves in a deep hole. And as with old Saddam, they might discover that the legal fallout could be quite amusing.

Just think how amusing it would have been if Saddam had an iPod when he was discovered. It would be interesting to see if he'd downloaded songs like Fixing a Hole, or perhaps, I Fought the Law. Of course, if he had, and had been using one of the so-called illegal music file-sharing networks, perhaps one of these narky recording industry organizations would have found him a lot sooner. Then he'd have a $3,000 fine to worry about, too.

If you're an iPod user and use other file-sharing networks apart from iTunes, it might be worth checking the legal implications – particularly, what happens to personal details when you download tracks. In many respects the Worldwide Web is rather like a borderless Wild West. But like the Wild West, there also seems to be an increasing number of wannabe sheriffs and bounty hunters out there determined to make sure there aren't any holes to hide in. MW

**'It appears British consumers who use iPods to swap music from other file-sharing networks may find themselves up a Tikriit without a paddle.'**

# Macworld reviews colour laser printers

Colour laser printers

## Phaser 8400

**Manufacturer:** Xerox
www.xerox.co.uk, 0870 241 3245
**Pros:** Fast, quality colour; prints on any media; low price.
**Cons:** The fast colour option is lighter than a normal print.
**Min specs:** Ethernet or USB.
**Price:** 8400B (USB Version), £699; 8400N (Ethernet version), £909.
**Star Rating:** ★★★★★/9.0

## LaserJet 3700

**Manufacturer:** HP
www.hp.com/uk, 08705 474 747
**Pros:** Fast output; decent quality.
**Cons:** Bulky; a bit pricey.
**Min specs:** Ethernet or USB.
**Price:** 3700 (USB version), £1,099; 3700n (Ethernet version), £1,349.
**Star Rating:** ★★★★/8.8

## C5300

**Manufacturer:** OKI
www.oki.co.uk, 01753 819 819
**Pros:** Cheap; mono pages are fast.
**Cons:** Slow first page to print; less-than-perfect quality output.
**Min specs:** Ethernet or USB.
**Price:** £975.
**Star Rating:** ★★★/6.9

Colour printing has enjoyed a massive boost in the past three years, due largely to falling prices and new technologies. High-end colour laser printers have moved to a single-path design, meaning the paper is printed on in one go, rather than going around the printer four times picking up a different colour each time. Single pass is faster and is getting closer to mono printer speeds – essential for businesses that demand speed as well as colour.

This new technology has overtaken the multi-pass technology of old, but multi-pass technology hasn't disappeared. It has been given a new lease of life in ultra-cheap colour printers. When you pay four or five hundred pounds for a colour laser printer, the amazing thing is that you have a colour printer at all; the fact that it only prints three or four pages a minute isn't such a worry.

We've tested three new printers that bring high-end single-pass performance to a new mid-range level, squeezing the multi-pass models even further down towards the consumer level. Remember that printers with these capabilities were three or four times the price a couple of years ago. This range of printers is ushering a new era of colour printing – an era where buying a mono printer is looking more like buying a mono TV; there are now very few excuses to use one.

The three printers are all laser-class printers, by which I mean they work as you would expect a laser printer to work – but the technology can and does differ. The **HP LaserJet 3700dtn** is a single-pass laser printer. The **Xerox Phaser 8400** is a solid-ink printer, which is technically also a single-pass technology. The **OKI C5300** is an LED printer – single-pass technology very similar to laser. Each technology has its strengths, though the results are closer than ever.

*Xerox Phaser 8400*
*A printer like this one cost over £3,000 not so long ago – now you get top performance and quality for under £700.*

*HP LaserJet 3700*

### Solid-ink technology

The Phaser 8400 uses a solid-ink engine, a technology initially developed by Tektronix that was bought by Xerox some years ago. Solid-ink printers use coloured wax blocks as ink. These are easy and clean to handle, unlike toner, and are melted down and sprayed through nozzles in a similar way to inkjet printing. Unlike an inkjet, though, the ink is sprayed onto a transfer roller, which transfers the ink to the paper.

The solid-ink technology was always a bit unusual mainly because Tektronix held the patent and nobody else could make solid-ink printers. It had advantages over laser in the early days because the process is a single-pass one, which made it a quicker printer. Once lasers became single-pass, solid-ink had lost its edge and didn't fare too well against the more familiar technologies.

Solid-ink still retains advantages over laser printers. Because the wax-based ink sits on top of the paper, you can get glossy results even on poor-quality laser paper. A criticism of early solid-ink printers was that the wax was laid-on too thickly and would even crack when the paper was folded. Tektronix and Xerox have long since solved that problem and modern solid-ink printers use a much thinner layer of ink. Now the pages are foldable and much more laser-like in their looks. The only thing that would distinguish a solid-ink print is its dithered tones. It's barely noticeable, but close inspection will show dots in gradations. Lasers also have their characteristics: there tends to be horizontal and vertical banding visible on parts of laser output.

A year or so ago Xerox realised that solid-ink printers could no longer command a premium price, and re-pitched them to the lower end of the market. The latest model, while using the same technology, is still at the very bottom of the price bracket for mid-range colour printers, but performs much better than the cheap multi-pass laser models.

### Speed matters

In our tests, the 8400 showed that it could easily reach the claimed 24 pages per minute (ppm) on both mono text and full colour pages. However, this was using the fast colour mode. This is like a draft mode, though the quality is much better than with previous printers. The only difference is that the pages are lighter, so black text is a bit grey, and colour is a bit washed-out. They're quite usable for internal documents, but if you wanted to impress somebody you should use the default Enhanced mode. This takes the performance down to 12ppm, but the results are much more impressive.


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First page to print is always an issue for designers because complex PostScript documents can tie-up a printer's processor in ways that word-processing documents can only dream of. Our much-feared printer killer test is a worst-case scenario, being a document that uses complex vector graphics, though the file size remains small. The 8400 got our first page out in around 40 seconds, which would have been record-breaking a couple of years ago, and is still very impressive. Mono text pages took just eight seconds from mouse click to dropping onto the paper tray.

These tests were done from a fully warmed printer. There is a standby mode that saves power by letting the ink cool; starting from this mode is a lot slower.

The price of the 8400 starts at just £699 for the USB version, and £909 for the network version. Normally we don't look at non-networkable laser-class printers because having an expensive printer used by only one machine doesn't make much sense. However, now prices have dropped so low there's a good case for a single-user colour laser. Comparing the performance with cheap multi-pass lasers, the Phaser 8400 beats the pants off the competition – the extra £150 or so is well worth spending. Compared to more-expensive printers the 8400 still looks like a good deal. The style of output is worth checking out before you make the decision, so get some test prints done if you can. But for the price it's difficult to beat it.

The HP LaserJet 3700 is a traditional colour laser printer, and its single-pass design means it can crank-out 16ppm in colour and monochrome. The price is a little more than the Phaser, with the USB only model coming in at £1,099 and the Ethernet version at £1,349 excluding VAT. If you were to compare the output with the Phaser, it would be on a par with the default Enhanced mode. Although the top speed of 24ppm is possible on the Phaser, that's at a lower quality than the LaserJet.

## Engine speed

There is also a cheaper LaserJet 3500, which looks much the same but runs a 12ppm engine. The price is similar to that of the Phaser, and would probably be a better comparison to that printer, as pages-per-minute speeds are the same. While the quality would be comparable, the first page out speed would be slower on the LaserJet.

The engine speed is superior to the Xerox model, but the processing power lags behind a little. This means that the first-page-out times are slower. However, the slowest time for the Printer Killer page was 58 seconds – just 18 seconds behind the Xerox model. Even if you're in a hurry, 18 seconds won't kill you.

***OKI C5300n***
*Unfortunately, this printer's LED engine made output-quality suffer – but for non-critical image- and colour-reproduction tasks, the C5300n is a good bet.*

The final printer we looked at was the OKI C5300n. This printer uses an LED engine, which in theory is as good as a laser engine; at least I've seen LED printers print as well as lasers. Unfortunately this time the quality was noticeably lacking. Compared to the HP and the Xerox models, the OKI fell down on a number of counts.

The fine lines in the Printer Killer test image, black over colour, showed white edges that shouldn't be there. This is a registration problem that I've seen before, but I thought LED engines had improved enough to eliminate this effect. The poor registration may also be the reason for the vertical banding that also mars the image.

While the image flaws may sound serious, and would probably put off graphics users, business customers are less demanding. Where accuracy is less crucial, the images are still far better than mono prints. And there's something else to recommend this printer to business users: it is fast at printing mono pages. While colour pages are printed at 12ppm, mono pages print at 20ppm.

First-page-out times also lagged behind, with the colour page taking a minute and a half – three times longer than the Xerox. This, combined with the quality issues, makes the OKI less of a great deal compared to the other printers.

## Macworld's buying advice

Solid-ink printers have never been mainstream products, but I think this Xerox printer is poised to change that. It offers such high quality, is so fast and so cheap that it represents a compelling buy. It will particularly appeal to graphics users as it prints well on any paper, and handles complex PostScript files quickly.

The HP LaserJet is also a good deal. It's more expensive, but has a higher print speed – and the first page to print is only slightly slower than the Xerox. HP will be popular with bigger companies that often standardize on one brand for printers. This is the best colour laser from HP that I've seen, with faster processing than previous models. The output quality is also high, but lacks the glossy output of the Xerox.

There always has to be a loser, and in this roundup OKI was the odd one out. On another day, the speed and output quality may have seemed acceptable – but compared to the other two models in our tests it lagged too far behind. It's still a cheap printer, though, and its graphics are good enough for business users. But with the Xerox model coming in even cheaper than the OKI, it makes it the obvious first choice.

**David Fanning**

Corking compact cam

## Camedia C-5060

**Manufacturer:** Olympus, 020 7253 2772 www.olympus.co.uk
**Pros:** Bullet-proof build; top-notch flash and focusing system; wide-angle zoom lens; great image quality.
**Cons:** Slow zooming.
**Min specs:** USB.
**Price:** £599 (including VAT).
**Star Rating:** ★★★★★/9.2

On the face of it, the digital compact camera concept should be having a tough time of it. From the high end it's being attacked by a tide of cheapish digital SLRs, while from the consumer side manufacturers continue to push ever-tinier cameras that are basically aluminium fashion accessories.

Faced with a pincer movement of performance and fashion, how are digital compact designers responding? The new Camedia from Olympus, the C-5060, offers a sound if familiar answer: continue to load compacts with serious 'pro' features but without compromising on the theme of portability that so appeals to amateurs.

What this adds up to in the C-5060 is a fast camera with loads of fine control and an excellent (and unusual) 27-110mm wide-angle zoom. Overall, we found it difficult to find anything wrong with this camera. Could it be that the C-5060 is now the best model in its class?

From the moment you pull it out of the box, the C-5060's understated demeanour grows on you. Constructed from a granite-like magnesium, the build quality reminds you of the way cameras were made when it was assumed that consumers would hang on to them for a couple of decades.

The ergonomics are decent, too, with well-placed buttons and thumbwheels, and a case design that fits nicely into the right hand. It's possible to load the Lithium-Ion battery and supplied xD-card, turn on the camera and start taking pictures without referring to the manual. Anyone who has used an SLR will find the controls familiar.

When you get beyond the basics, the manual will be needed, however, as the on-screen menus take time to get used to, and the camera has a lot of features with which to contend. The comprehensive reference manual comes as a PDF on CD and runs to 289 pages, so it's easy to see why Olympus didn't supply it in book form.

### Control freak

As far as shooting control goes, the C-5060 specification ticks every conceivable box. You'd expect a range of SLR-like exposure, flash and metering modes (aperture, shutter, automatic, scene modes, and so on), but we were impressed by the fine degree of control the camera gives. Press a button and set exposure compensation up or down in half- or one-third-point increments using the thumbwheel – that's convenient. Press the button below it and set flash intensity up or down in the same way – that feels more like a breakthrough. Other controls on the camera surface lock exposure, switch between auto and manual focus, quickly review shots, and rotate pictures 90 degrees in-camera.

A custom button on the top allows a range of menu functions to be accessed quickly, including image contrast, colour saturation, sharpness, noise reduction, white balance (this can be very precisely set), and ISO settings (80-400).

***High performance***
*Low-light performance was good thanks to optional AF illumination and the 'continuous' focus mode (where the camera automatically focuses on the subject without the user half-depressing the shutter button) worked surprisingly well.*

The C-5060 supports xD-cards, CompactFlash and IBM Microdrives. You get a 32MB xD-card with the camera and could, say, supplement this with CompactFlash, which is cheaper than xD memory and available in larger capacities. You can switch between memory types at the press of button, without having to remove or disable one first.

### RAW deal

We were happy to take pictures at what Olympus calls 'SHQ' setting (2592-x-1944 pixels), and jolly good they were, too. As well as RAW and TIFF formats, files can be saved in a novel 3:2 ratio (which, we assume, allows 6-x-4-inch prints to be made without cropping) and a virtual eight-megapixel mode 'enlarged' size of 3256-x-2448 pixels.

The inclusion of a 27mm lens in this sort of camera marks an important coming of age for digital photography. Previously if you wanted a focal length below 35mm, you'd have to buy an adaptor ring (about £20) and a separate add-on lens (say £60-£80), and hope against hope that barrelling (where objects close to the lens become vertically distorted) wasn't too obvious. With that capability built in from the start, Olympus has been able to make some optical compensation for that effect.

Image quality is excellent, but let's be clear that beyond a certain point some of this is subjective. Tweak the settings appropriately and we'd say it matches the Canon G5. We'd put this down partly to the sure-footed auto-focus system. It isn't the fastest at finding its subject but we found it very reliable when mastered.

The C-5060 is a fairly fast camera in every respect bar one: zooming is slow – it takes almost four seconds to move between the widest focal length of 27mm and the 110mm telephoto (equivalent to a 35mm camera). Most of the time, this matters not. But in certain situations it will hinder shot re-composition just long enough for the opportunity to be lost.

Files are saved fast enough for delays not to be noticeable. The high-speed shooting mode allowed three shots per second in SHQ mode, with the option to bracket shots according to focus as well as exposure. Shutter speed runs from 16 seconds up to 1/4,000th of a second.

The 1500mAh BLM-1 Lithium Ion battery requires a daunting six hours for a full charge, but compensates for this by holding up well. It's still a good idea to buy a second one that will set you back a rather steep £70 until a third party produces a cheaper clone.

### Macworld's buying advice

So, is the C-5060 the new compact to beat? Probably. The tardy zoom is an irritation and the clever swivelling LCD was inclined to wash out a scene even when the screen contrast had been adjusted. But look at it pragmatically: The C-5060 takes great pictures now, so it will taker great pictures in five years' time. That makes it the sort of camera you can cultivate a warm friendship with. Just don't think too deeply about those rumours of Canon's G6.

**John E Dunn**


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Classic synth sounds

## CS80V

**Publisher:** Arturia
www.arturia.com
**Distributor:** Arbiter, 020 8970 1909
**Pros:** Classic sounds of the Yamaha CS80 synthesizer – and no more back trouble!
**Cons:** CPU-hungry.
**Min specs:** Mac OS 9; OS X 10.2.
**Price:** £169 including VAT
**Star Rating:** ★★★★/8.8

***Effects-laden***

*The original CS80 has a basic arpeggiator, which can be used in the CS80V together with MultiMode as an 8-note step sequencer – perfect for creating those robotic-sounding synth lines that are currently so popular. You can even pan the positions of each voice across the stereo outputs. Built-in effects include chorus and stereo delay.*

Looking for a truly great virtual instrument? Well look no further. The designers at Arturia, the company who came up with the amazing simulation of the classic Moog Modular earlier this year, have surpassed themselves with this even more amazing simulation of Yamaha's classic CS80 synthesizer. I remember this beast well! It was one of the first polyphonic synthesizers available in the late 1970s and early 80s and was highly regarded by synth players at that time. The trouble was it weighed 80kg, and undoubtedly contributed to my subsequent back problems. Also, tuning involved a special and fiddly procedure, and it was difficult to keep in tune. Yamaha had so many complaints about this that it decided to stop producing analogue synths from the early 80s onwards in favour of digital units that don't suffer from tuning problems. The company couldn't take the loss of face.

The CS80 is a junior version of the legendary Yamaha GX-1 used by the likes of Stevie Wonder in the early 70s. The good news is that Arturia's CS80V can emulate the GX-1, too. The design team added a MultiMode that lets you assign the eight available voices to four keyboard zones and four different MIDI channels. It is also possible to layer the eight

voices to create huge sounds. They also added extra waveforms to the oscillators and a sophisticated Modulation Matrix that modulates a range of destinations from a wide range of sources. These include the LFOs and various envelope generators as well as the usual controllers and pedals.

The install CD contains Mac and Windows versions of the software and you get a standalone version along with a selection of plug-in formats. These include Audio Units, Pro Tools HTDM, RTAS, VST and MAS for Digital Performer on OS 9.

### Macworld's Buying Advice

The CS80 comes with a great selection of presets produced by an international team of sound designers. My favourites were created by Katsunori Ujiie, whose sounds showcased the stereo features and new modulation possibilities. With ringing endorsements from the likes of Roxy Music's Eddie Jobson, the CS80V is hard to resist. And the detail of the user interface is a work of art in itself. Disadvantages? It's CPU-hungry. The persuader for me is the extremely reasonable asking price.
**Mike Collins**

Drum-synth plug-in

## RMIV

**Publisher:** LinPlug
www.linplug.com
**Distributor:** Time & Space, 01837 552 00
**Pros:** Useful virtual drum-synthesizer and sampler with several excellent multisampled acoustic kits.
**Cons:** No Audio Units or RTAS versions available; sounds could be better.
**Min specs:** Mac OS X 10.2; 512MB RAM; 1.1GB hard-drive space; 400MHz CPU; VST 2.0-compatible host application.
**Price:** £99 including VAT.
**Star Rating:** ★★★★/7.5

***Click-lack***

*LinPlug has been designing drum machines for some time, and the RMIV represents the fourth generation of its efforts to produce a more musician-friendly product. Feedback from pro users encouraged LinPlug to design an all-in-one edit screen. This provides access to all the controls with minimum number of mouse clicks – so it's fast to use.*

The RMIV is a flexible and easy-to-use drum machine that combines analogue-style percussion synthesis with a full featured, intelligent percussion sampler. It has 18 velocity-sensitive drum pads that can be used to trigger its Audio Generator Modules. There are ten percussion synthesis modules and a fully featured percussion sampler.

The synthesis modules can create anything from classic analogue drum sounds to the cutting-edge sounds of contemporary music. The sampler module provides single-sample, multi-sample, velocity-layer and velocity-crossfade support, at up to 32-bit resolution. The instrument also includes an AHDSR-controlled multimode filter; a fully featured compressor designed specifically for percussion sounds; a flexible Humanizer; and a 6-x-6 Modulation Matrix.

It's clever, too: unused processing modules such as envelopes or effects are automatically switched off when not in use to conserve CPU resources. I particularly liked the preview in context feature. This lets you browse through kits and samples even while the RMIV is playing back – great when things need to be done fast. Click the RMIV logo and the back of the drum machine is revealed. Here you can change the basic settings for each sound at the click of a mouse and choose how many audio outputs to use.

To get you started, the RMIV comes with 170 sample-based and synthesized drum kits. You can also load in kits in RM2, RM III, LM4 and CM-505 formats, or load samples in WAV or AIFF format. I was able to use the RMIV right away on a version of a Marshall Jefferson track that I'm currently producing. I used a combination of TR808 and TR909 type sounds on this.

The rimshot sounded a little different from, but even more interesting than the real TR808. The bass drums weren't as convincing, but several of the other sounds were. Then I tried some congas – and was impressed by the quality, realism and range of the samples provided.

### Macworld's Buying Advice

The RMIV isn't available for RTAS or AU, although an AU version is planned – so it's only for VST applications at present. VST users have a lot of choice, such as Steinberg's LM-4, Yellow Tools Culture or Native Instruments Battery.

The RMIV's library of drum sounds is decent. It has a better choice than the LM-4 and is more on a par with Battery. But Culture has a better selection of more natural-sounding percussion samples. Nevertheless, the RMIV compares very well – scoring heavily with its super-friendly user-interface. And it's worth every penny of the very reasonable asking price.
**Mike Collins**


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The flat-panel iMac is a masterpiece of design. Jonathan Ive and his merry band of industrial design gods made it a unique and groundbreaking computer. Although an iMac will jazz up any desk, the iGo is a desk designed with the iMac in mind, and the two together are quite a sight.

There are two versions of the iGo: one for standing at, and one for sitting at. The standing version has feet; the sitting has castors. Otherwise, they are just at different heights.

While the iGo is visually stunning, the practicalities of the design are limited. There's a shelf for the keyboard and mouse, but no room for anything else. This immediately made me think that this is a computer desk for true minimalists, though I'm not sure if such a person exists. There's a shelf – well, a flat surface where the legs are held together – that's small and flimsy, and unsuitable for big stuff like printers. You might balance your iPod there, or a digital camera, but not both. The more I sat at the desk, the less likely it seemed that it was designed for real users. It left me wondering exactly who it is aimed at.

That said, it's beautifully designed. Wires are hidden in the base, and discreetly coiled away with the wire-tidying spring. There's a light in the base. too, which sets the look off beautifully, but does little else. The keyboard and mouse rest is reversible to cater for southpaws like me. A couple of dimples at the back of the rest are for your Apple Pro Speakers. There's not much else to it, but being a piece of minimalist sculpture I suppose there shouldn't be.

If I haven't put you off with the impracticalities of a desk you can't put things on, then you'll need to put the iGo together. It seemed a bit daunting at first: there are lots of pieces, and it's spine-crunchingly heavy. However, the instructions are clear, parts are numbered, tools are provided, and it took no more than 25 minutes to finish, even at a leisurely pace. The pieces fit together and gradually the structure becomes more solid. It seems well geared to take the weight of the iMac – even the new 20-inch version. The only niggle is the keyboard rest, which seems flimsy. It's fine for occasional use, though, and as there's no room for elbow resting it should be up to the job.

Flat-panel iMac stand

## iGo

**Manufacturer:** Rain Designs
www.igo4mac.com
**Pros:** Looks great; hides cables.
**Cons:** Not terribly practical; pricey.
**Min specs:** Flat-panel iMac.
**Price:** Sitting version, $499; standing version, $599. Currently iGo is sent directly from the US at a cost of $89, plus import duty.
**Star Rating:** ★★★★/7.8

### Macworld's buying advice

If you want to buy an iGo for your study or bedroom, I would think long and hard about it. If its new home looks anything like an Ikea catalogue, you'll be alright. If it's to be wedged between a filing cabinet and a photocopier, think again. I think iGo's forte will be in public places where the design can be appreciated and the impractical aspects are less apparent.

The price tag is also more suited for businesses – or at least style-gurus. Home users would quickly figure out that $499, plus $89 shipping, plus import duty, quickly mounts up to half the cost of an iMac. But when you're buying a piece of design like this, cost becomes secondary to the effect.

**David Fanning**

***Better by design?***

*A piece of furniture like this is like an extension of the iMac, and it would look odd in my front room. It would work well in a space-age reception, a kiosk in the design museum, or as part of an exhibition stand, but I just can't see living with it full time.*

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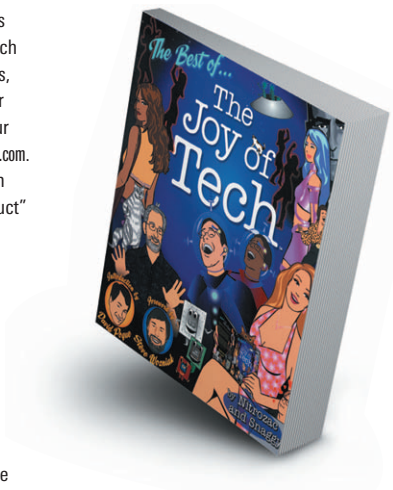
Nitrozac and Snaggy are legends on the Internet; their Joy of Tech comic strip has a legion of fans, including us here at Macworld. Regular readers will have seen their work on our letters page, or perhaps at www.joyoftech.com. Finally, they have published a collection of their work in "a processed tree product" as they put it, The best of Joy of Tech.

Just about anybody who uses a Mac will enjoy this book. You are sure to recognize the character types in the cartoons, and I'm sure none of you will think they are based on you. But geeky Mac users are the subject of the cartoons – so if you're a touch geeky, you'll know.

Geekiness isn't a subject for ridicule in these pages. Well, not much anyway. Geeks are more revered, almost heroes, in this book. You'll see geek school bullies, geek easy riders (on Segways) and one geek to rule them all: "Lord of the Root".

Their fondness for geeks has won Nitrozac and Snaggy some friends in high places. There are two forewords in the book, one by Macworld's David Pogue and one by the inventor of the Apple – and everybody's favourite geek – Steve Wozniak. Woz is pictured on a geek trading card, and David Pogue – the ultimate Mac showman – is pictured in top hat and tails with a chorus line. (In a previous life, David was a Broadway conductor!)




The Joy of Tech isn't limited to just Mac geeks: there are Linux geeks and Trekkies included in the book. There are also Sims geeks, Newton geeks, and more. So whatever kind of geek you are, there's always another geek subculture for you to laugh at.

### Macworld's buying advice

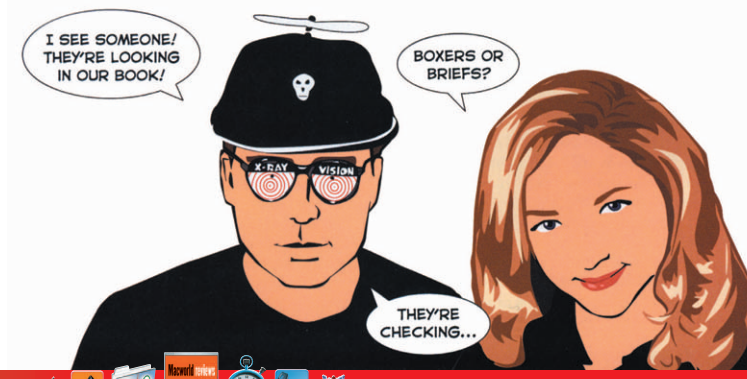
Nitrozac and Snaggy have captured geek culture with wit and wisdom. The jokes are good, though a bit cringe-inducing when it gets too close to home. As long as you're comfortable with your level of geekiness, you'll get a lot of laughs from this book. An ideal present for anyone with a Mac.

**David Fanning**

Geeky cartoon fun

## The Best of Joy of Tech

**Publisher:** O'Reilly; ISBN: 0-596-00578-4
**Pros:** It's funny, full of in-jokes that Mac fans will get.
**Cons:** May hit close to home.
**Min specs:** Eyes.
**Price:** £9.99 including VAT.
**Star Rating:** ★★★★/8.8



Macworld preview

## Stylus Photo R800

**Manufacturer:** Epson
www.epson.co.uk, 0800 220 546
**Pros:** Archival quality prints; large colour gamut; glossy output.
**Cons:** Although the price isn't yet set, it's likely to be expensive.
**Min specs:** Mac OS 9/OS X; USB or FireWire.
**Price:** TBA, but believed to be in the region of £350 including VAT.

Just when you think inkjet printers can't get any better, Epson proves you wrong. We got to look at a pre-production version of the latest photo printer from Epson, the R800. It takes photo printing beyond what was possible before, using an eight-cartridge system for ultimate colour reproduction.

The inks are cyan, magenta, yellow, matte black, photo black, red, blue, and something Epson calls Gloss Optimiser, which is a clear coating for ultra-glossy images. The reason for the ultra-high-quality output is mostly down to the inks. However, the small drop size helps get the finest detail and, because of the variable drop size, it can print less-detailed areas quickly.

The array of inks is a bit baffling at first. Cyan, magenta and yellow are as you would expect, but there are two blacks. The photo black is designed for high-gloss paper; the matte black is a higher density for printing on matte paper. The whole ink collection is known as the UltraChrome Hi-Gloss ink system. This is the first time an A4 printer has been endowed with this ink set, and it's bound to be appealing for amateur and professional photographers alike.

The thing that makes UltraChrome Hi-Gloss inks special is that they are glossy pigment-based inks. Usually pigment inks give a matte finish, because the ink is made from tiny particles suspended in liquid that results in an uneven surface. Dye-based inks sink into the paper – so if the paper is glossy, it remains glossy. UltraChrome ink gets over the problem by suspending each pigment particle in a sphere of resin. These encapsulated pigment particles flatten out when sprayed at the page, thus reflecting more light and appearing glossy.

Compared with silver halide (traditional photographic prints), the R800 is at least as good for archival prints. Blue and red inks increase the colour gamut, giving the R800 the widest of any A4 inkjet printer.

When printing on inkjet printers the speed is variable, depending on the computer from which you're printing. This is because your computer does the calculations to process the image; fast computers will print faster. The R800 isn't a massively fast printer, despite having both USB and FireWire connectivity.

Using the faster FireWire connection gave no speed increase. Our worst-case-scenario image, which had around 85 per cent coverage, took just under four minutes to print at the best quality setting. There is another setting called Photo RMP (Resolution Management Technology) which took considerably longer (around eleven minutes), but with no discernable improvement in quality.

### Macworld's buying advice

The printer we looked at was a pre-production model, but should in theory perform as would the finished model. Its performance was outstanding – output was as good as I've seen from an inkjet printer. Colour was spot on, and the unit is flexible enough to print edge-to-edge on any size paper – even onto CD. Epson has set a new benchmark with this printer, and I'm sure it will prove very popular with both amateur and professional photographers. The R800 will be available in early February.

**David Fanning**

***Staying power***

*The advantage of pigmented inks in general is that they are much more fade-resistant than dye-based inks. While official figures are still being worked on, Epson estimates that prints on Glossy Photo Paper will be lightfast for over 80 years. Matt paper will last even longer: a conservative estimate is over 100 years – so most likely longer than most of us.*

Pen-sized scanner

## IrisPen Express

**Manufacturer:** Iris
www.irislink.com
**Distributor:** Widget UK, 0800 138 1639
**Pros:** Faster, lighter and cheaper than ever.
**Cons:** Still awkward for left-handers.
**Min specs:** USB; Mac OS 9 or OS X.
**Price:** £99 including VAT.
**Star Rating:** ★★★★/8.6

The previous version of the IrisPen was impressive, but the new one adds even more features. If you aren't familiar with the original IrisiPen, it's a pen-sized scanner that automatically generates text when it scans printed words. Getting clippings from newspapers or magazines is easy. Just drag the scanner across the text, and presto – it turns up in your text document.

The new pen is faster and smaller. It can steam through 1,000 characters per second, which is almost certainly faster than you can scan. As with all OCR (optical character recognition) software, accuracy is imperative. This scanner scans a line at a time, rather than whole pages, so if the OCR was full of mistakes it would just be easier to type it yourself. Thankfully the accuracy is excellent – as long as you scan straight. It's a good idea to use a ruler or some other straight edge against which to run the scanner.

Southpaws are at a slight disadvantage as the scanner is designed for right handers. There are settings to make it easier for lefties, which helps a little. But either way, it can be difficult to see which line you are aiming to scan properly.

If I were to redesign the IrisPen I would prefer a slightly wider scanning head, or at least have a guide to show exactly what the scanner is scanning. It's rather hit and miss at the moment, until you get used to it. A slightly wider scanning area would let you scan a whole business card, for example, which would be… er… handy.

I'm sure this device will be a godsend for some people, but I'm not sure who would actually get the best use out of it – it's one of those products that you don't know you need until you need it. The barcode-reading ability might be more useful than the OCR to some people. But I'm still struggling to find common everyday uses.

Iris makes a point to say that it can be used for numbers as well as alphabetic scanning. I could see myself using this scanner to grab stock prices from the Financial Times – it automatically adjusts to different background colours.

### Macworld's buying advice

If you need a pen or barcode scanner, this will do the trick. It's light and easy to use, and does just what it claims.

I'm still struggling to find a proper use for it, but Iris has been making them for years, so somebody must have thought of something.

The improvements may not warrant an upgrade from the previous IrisPen II, but if you're still struggling with the older serial version, now is the time to upgrade.

**David Fanning**



Macworld.co.uk Subscribers can search Macworld's Reviews database online (www.macworld.co.uk), updated throughout the month

Interior-design tool

## Interiors

**Publisher:** Microspot
www.microspot.co.uk, 01622 687 771
**Pros:** Inexpensive; large library of furniture and textures.
**Cons:** Not as intuitive as it could be; patchy interface; sluggish.
**Min specs:** Mac OS X; 450MHz G3; 256MB RAM.
**Price:** £92 including VAT.
**Star Rating:** ★★★/6.6

Having just moved house I was excited to get a copy of Interiors from Microspot. It offers the ability to create realistic 3D representations of your design plans. Well it does in theory, but in practice I found it wasn't quite as simple as I thought.

Microspot is a small software company based in Kent. Its MacDraft product is well established, and Interiors is up to version 3.4, though this is the first OS X-ready version.

Interiors claims to be intuitive and easy to learn, but I would say that claim is a little over-ambitious. It isn't terribly hard to learn, but I wouldn't call it intuitive. It does come with a software manual, which is helpful up to a point, but a printed one would be welcome.

I would heartily recommend following the tutorial to begin with. That way you'll understand the capabilities and limitations of the software.

The first thing to do is draw the walls of your room. There are two ways of doing this: either draw a box for a convenient square room, or use the Walls tool to draw an irregular room. Each length of wall you draw invokes a pop-up window so you can type in exact measurements. Unfortunately, there's no convenient way to set scale, so you may find that your carefully measured room occupies a small corner of your workspace.

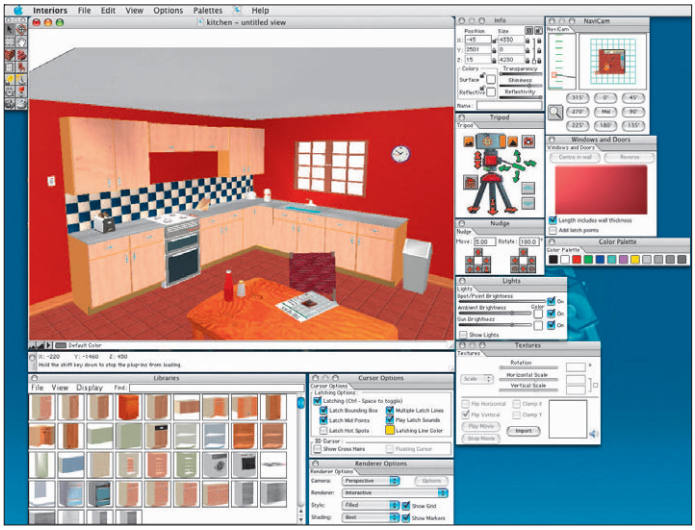
The next step is to add a floor. This is easy, as there's a Floors plug-in to do it for you. The application is made up from a number of plug-ins. The Walls tool, the Floors tool, navigation and the rendering parts of the application are all plug-in-driven. This may be a great way for programmers to collaborate on a project, but it's confusing to the user. Instead of these tools being under a normal menu, they're all thrown together in the plug-ins menu.

Once the walls and floor are taken care of, you can use the Windows and Doors function. This is certainly easier than most applications for adding windows and doors to a model. There are accurate positioning boxes that make getting windows in the right place simple.

Next you can start dropping furniture into the scene. There's an extensive library of hundreds of pieces of furniture for you to use, yet I still struggled to find pieces to accurately represent my own furniture. The other problem is that the size of the furniture isn't necessarily the size of your real furniture. This can be adjusted by typing measurements into the info box. Frustratingly, the info box is rather cryptic: rather than simple measurements for length, breadth and height, you're faced with XYZ co-ordinates and measurements. It's not impossible to figure out what this all means, but for a piece of software aimed at non-3D-savvy people the XYZ co-ordinates might only serve to confuse.

The next step is to add lighting. This is simple, and will make your final rendering more realistic. Now we're ready to add some textures. Again, there is a library of textures for floor and wall coverings, but it's likely that you'll want to add your own.

Around this point, you'll begin to wonder what the final image will look like, so some test renderings may be in order.



***Linda Barker, eat your heart out***
*Interiors is easy enough to get to grips with, but its plug-in-based architecture felt unfinished. That said, for £92 and decent results, you can't really argue.*

### Macworld's buying advice

I really wanted to like this program, as I wanted to use it to plan my new kitchen. However, I found it frustrating at times. The performance is quite sluggish, even on a 1.25GHz G4 with 1.5GB of RAM.

This jerky performance coupled with the almost patchwork interface of plug-ins makes it difficult to love Interiors. Even so, it's still possibly the easiest way to plan your interiors on a budget. I don't think it lives up to the claims of ease of use, but the alternatives are usually even more complex. There are a lot of things I would change about this application, but I'll probably still use it to plan my kitchen.

As long as you don't expect miracles from Interiors, you should get good use out of it. At the price, you won't find any other 3D alternatives.

**David Llewelyn-Fanning**

***Final renders (below)***
*Selecting the NaviCam plug-in will give you controls over the camera to set up your scene. Then the Rendering Options palette is used to set how you want your scene rendered. The resulting file is a 72dpi image; higher resolutions are not supported.*

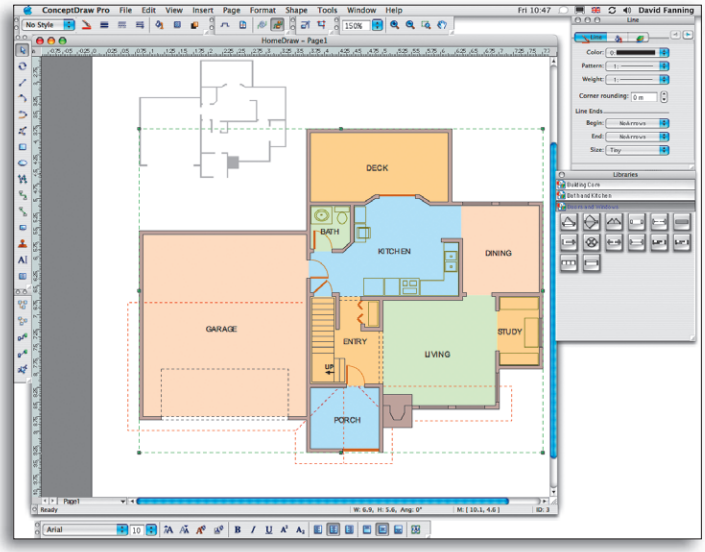
ConceptDraw V is the latest version of the versatile drawing application. It offers a simple way to make business and technical diagrams, floorplans, sketches, and much more. It has extensive libraries of elements that can be included in diagrams – everything from maps and flags to resistors and furniture.

Odessa has completely overhauled much of its interface and graphics engine. The original was a bit clunky, but a massively useful application all the same. It has come a long way since then, but there are still niggles that remain.

The new interface was a much-needed improvement, but it's still weighed down with a humungous amount of options. Its functionality is a double-edged sword because while it's good to be able to do all these things, the more there are of them, the harder it is to find the tool you need. This is less of a problem once you become au fait with the interface, but that could take a while.

Another new addition is Autosave. Preferences can now be set to automatically save at intervals as short as a minute. This might seem excessive, but I had cause to use it rather more often that I should have. In testing, ConceptDraw Professional V crashed. Once is bad; twice is very bad. I crashed at least half a dozen times in the course of the day – and that's just not on. A version-five product simply shouldn't do this, so I decided to take another look at the version history. It turns out that the last version of ConceptDraw Pro was version 1.8, but now it's jumped to 5.

This kind of jump isn't unprecedented: Illustrator skipped a few numbers on its way to version 10, and other apps have done the same. But the thinking behind ConceptDraw's massive leap is rather odd, and more than a little naïve. The last update was three or so years ago, and since then there have been some big changes – the new graphics engine, new interface, and so on. The guys figured that they had made so many improvements in the three years that had they released each update as it was made, they would be on version five now. Sorry – it doesn't work like that. Nobody releases four whole-version upgrades in just over three years. This is ConceptDraw 2.0. It's a fine upgrade, but it has enough bugs to warrant a 2.1 bug fix version at the double.




***Interface customization***
*Luckily, the toolbars are now customizable – so with a little effort at the beginning, you can simplify the interface with your own design.*

Technical-drawing tool

## ConceptDraw V Professional Edition

**Publisher:** Computer Systems Odessa www.conceptdraw.com
**Distributor:** Computers Unlimited, 020 8358 5858
**Pros:** New interface and graphics engine; extensive libraries.
**Cons:** Doesn't warrant a four-version leap; buggy; basic library contents.
**Min specs:** G3; OS X 10.1.5.
**Price:** £293, upgrade, £82.
**Star Rating:** ★★★/6.8

## Scripting power

Whatever version this really is, it's a powerful application. It's easy enough to stumble around and get the pictures you want, but more-advanced users have access to tremendously useful features.

It has a built-in scripting language that enables access to databases. This will be a boon for corporate power users and anybody else with a scripting talent. Advanced users will also enjoy the ability to create custom styles, making it easy to keep diagrams looking consistent.

Another feature guaranteed to keep corporate users happy is support for XML for Visio. This lets users exchange documents seamlessly with Visio, which is a Windows-only diagramming tool. However, the use of Macs in corporate environments is relatively rare.

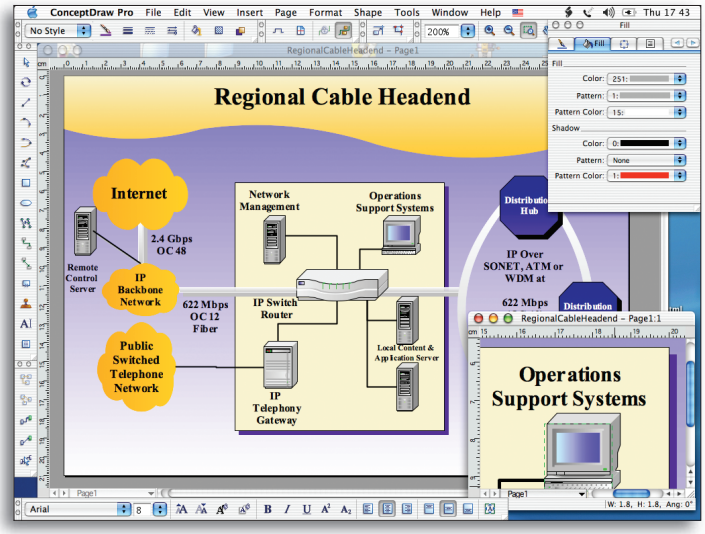
That said, there are dozens of libraries in 20 categories, so if you're looking for something it's likely to be there somewhere. There's a lot to be said for having everything, even if it isn't of the finest quality.

## Macworld's buying advice

I really want to love this program. It's made by a nice bunch of people and is capable of great things. It's a shame that this release is marred by bugs – though the company has promised me that it's working hard to eliminate them. The usability of the application is much improved, and the high-end database features are still in there. This could be the answer to many problems.

I would recommend waiting for this application to be finished properly, which I expect to happen soon. Once the bugs are ironed out it will be much more useful. Until then, there are other diagramming applications such as OmniGraffle that you might want to consider. OmniGraffle is a lot more Mac-like: it has a beautiful Aqua interface, is genuinely intuitive, and produces lush images. It doesn't have some of the high-end features or the vast libraries of ConceptDraw V, but it depends what you're looking for. For simple beauty, OmniGraffle wins; for raw power, ConceptDraw V nudges ahead.

**David Fanning**

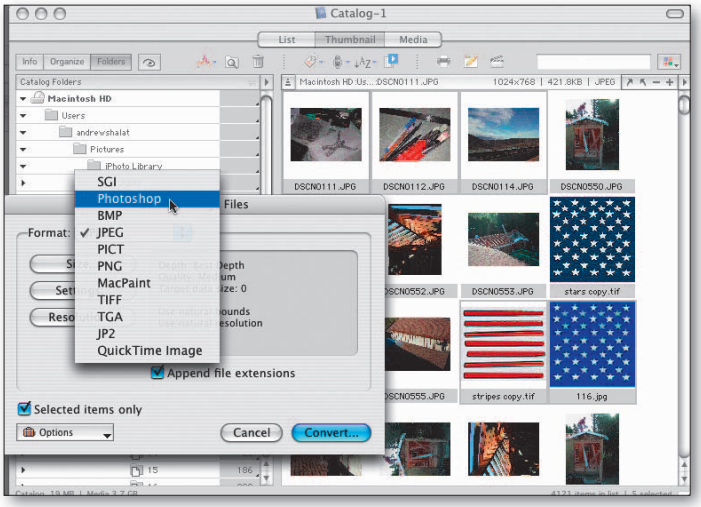



***Clip joint (left)***
*The libraries included with ConceptDraw V are extensive, though the actual artwork is quite basic. Libraries are available for networking, for example, but the images are line-drawings of PCs. This is probably fine for Windows users – they'll probably marvel at the quality – but Mac people will probably find this dodgy clip-art an affront to their lush Aqua-fied environment. We now expect lovingly rendered, anti-aliased colour icons, rather than line-drawings that wouldn't tax a dot matrix printer.*

Media-cataloguing

# iView MediaPro 2.0.1

**Publisher:** iView Multimedia
www.iview-multimedia.com
**Pros:** File conversion utility is comprehensive; cataloguing is fast; mall catalogue sizes; customizable HTML templates; built-in CD-backup capability.
**Cons:** Image enhancement Batch commands don't handle complex series of actions.
**Min specs:** Mac OS X 10.1.
**Price:** $160; upgrade, $72.
**Star Rating:** ★★★★/8.5




***Value for money***

*Instant file-conversion would be enough to satisfy most of us, but the breadth of tools within the conversion dialog makes iView MediaPro 2 a graphics or photography professional necessity.*

People have long been using iView MediaPro to help organize digital photos and images, sounds and movies. It makes Web galleries in a snap and catalogues disk contents with ease, at a reasonable shareware price. But the media-cataloguing world has become crowded recently in the professional and consumer spaces, with rival products such as Apple's iPhoto, and Extensis Portfolio.

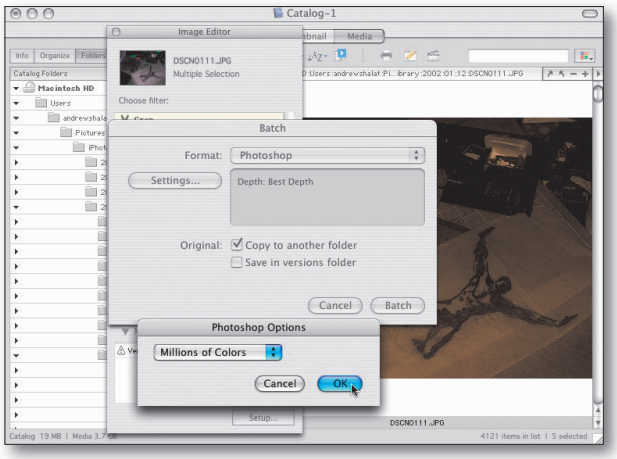
It's no longer enough to make catalogues, create Web pages and have good dinner conversation. Now a cataloguing application has to sing and dance as well. And iView MediaPro 2 does a fine tap shoe. It has become a complex and powerful digital-asset manager with increased capabilities and, not surprisingly, price.

As its name implies, iView MediaPro is a professional's tool. Designers and publishers will be happy to see that this version surpasses version 1.0 with its speed, while adding some interesting and versatile features such as improved slideshow creation, simple-but-useful image-enhancement tools, high-resolution PDF creation, and customizable HTML themes. We'll tell you more about these below, but first let's address its most versatile tool of all –file conversion.

Anyone who's had to convert a group of images from one file format to another – and let's face it, every graphics professional has – can now breathe a sigh of relief. Saving you from having to open a dedicated imaging application such as Photoshop, or even something as small as GraphicConverter, iView Media Pro 2 can change file formats individually as multiple selections or whole catalogues.

***Job lot***

*While the Batch feature is powerful and timesaving, we wish you could choose more than one filter at one time, and perform those in a batch process, along the lines of Photoshop's Actions. Still, iView MediaPro 2 does a good job of keeping you out of Photoshop until you have some real heavy lifting to accomplish.*




## Image Re-purposing

iView MediaPro 2 can set image size, resolution, image depth and colour space. So, for instance, you can take a set of files that were ready for a print brochure, and instantly convert them from 300dpi CMYK TIFF files to RGB JPEGs at 72dpi, ready for a Web project. But iView MediaPro doesn't only handle image conversions.

Since it can catalogue movies, sounds and images, each of these formats has its own conversion options. Movies can be converted from QuickTime to DV stream (a handy tool for iMovie enthusiasts), MPEG-4, or several other formats. It can convert sound files from MP3 to AIFF, Wave, or System 7 Sound.

You can also save your settings so you don't have to go back each time to repeat the more tedious aspects of your workflow. A recurring theme in this program is that it performs just enough utility to keep you from needing to open other more-specialized applications.

iView MediaPro can now import files à la iPhoto, directly into the program. It also mirrors iPhoto's ability to erase files from a camera's media from within the application. And like iPhoto, iView MediaPro includes image enhancement tools. The program's array of tools is wider than iPhoto's. Beyond brightness and contrast control, crop, resize, and remove red-eye, you'll find sharpen edges, adjust saturation, convert to duotone, and invert photo negative. All these filters are adequate adjustment tools in their own right; iView MediaPro's batching and version control increases their professional value.

Version control lets workgroups keep abreast of new or altered files, backing up copies in a designated Version Control Backup Folder. After performing an enhancement, the Batch command can perform that same function on other images in that catalogue and safely put those enhanced images into a new folder.

PDF creation is one of those things we're starting to take for granted in the OS X era. This program will create high-resolution PDF's for offset printing, not just Internet distribution. For some reason unknown to this writer, the PDF maker is hidden under the Window menu, rather than next to the conversion menus in the Make menu. Yet, this tool is also a powerful innovation. It acts as a rudimentary page-layout application, letting you choose image areas, resize and crop them, overlay images, and then make that sheet into a PDF. While it isn't QuarkXPress or Adobe InDesign, it's a quick and easy way to make customized one-sheets and contact sheets without too much trouble.

HTML galleries have always been easy with iView MediaPro. The difference now is the ability to add custom HTML templates through the greatly enhanced theme-based Make HTML Gallery menu. You can make HTML themes and store them in the new Plug-ins folder.

After you've catalogued files, iView MediaPro lets you back up media assets directly to CD, saving you from going outside to a CD burning application.

## Macworld's buying advice

IView MediaPro doesn't want you to leave. Rather than going outside to dedicated image-editing apps or HTML tools, iView MediaPro wants you to get as much of your work done within its walls as possible, hopefully saving time in the process. And it does an admirable job of it.

You'll be surprised to see how many of the more mundane aspects of media management can be dealt with by this powerful little application – and they're handled with alacrity, efficiency and produce excellent results.

Photographers, designers and graphics professionals will find a valuable new friend in iView Media Pro, which is well worth its new professional $160 price point.

**Andrew Shalat**


Macworld.co.uk Subscribers can search Macworld's Reviews database online (www.macworld.co.uk), updated throughout the month

He started off small, singing for money in Hollywood's nickel-&-dime karaoke bars; success seemed a long, long way off.

That was the beginning, but with an optimistic spirit, a little luck and far less talent, it didn't take too long: Freddie Loved By Housewives found an agent and played to ever-increasing crowds – he knew his star would shine, one day. Then he started getting paid. Not a lot – certainly not enough – but it was good to see the $10s and $30s going into the family account. Slight fame and new friendships had their price, however, and relations with his partner grew increasingly strained, but were quickly repaired when he came home with a satellite dish and massage chair.

Be warned, though – Sims in search of fame will see some of their valuable relationships flounder; but there's an exchange – that so-far difficult Sim neighbour may yet fall for your charms as your star power climbs. Fame has its price – and fleeting though they be, also its rewards. Grab what you can, when you can, some say. May your star shine high.

## Play that funky music

The penultimate expansion pack for The Sims from Aspyr deeply impressed us: "It's the best one yet," commented one reviewer. You see, what's offered in here isn't just an enhancement to existing gameplay, but the introduction of a whole set of new gaming choices for hardened Simmers.

So, what's the game about? The Sims – Superstar offers players a chance to take their Sims into show business. It introduces new career paths – music, fashion and movies – but you'll need to accumulate star points to unlock the latter two. One crucial thing, unlike existing Sims careers, in which all you see is the Sim going to work lively and getting home tired (how like life), players get to guide their characters through the twists and turns of show-business, gently micro-managing that career as they play. Players will see new interactions (schmooze, sign autographs), and get 175 new objects to place in their homes.

Superstar introduces a new area, called Studio Town. This is where the action happens, and offers a hornet's nest of cheap karaoke bars, open-mic clubs, recording studios, movie houses and spas. Some of these areas are locked to Sims early in their careers; exclusivity prevails among the famous.

## Agent provocateur

Getting-started Sims sign-on with an agent. They'll then receive a celebrity magazine with their daily paper. This lets you check the top ten famous superstars on a daily basis. Sims with agents get driven to Studio Town in a limo. Sims without have to pay $50 for the drive – but it's worth taking a look inside Studio Town before hiring an agent. (By the way, if Superstar is the only expansion pack you own, you will still get up to five extra standard neighbourhoods to populate. You also get lots of new objects, including a diving simulator, massage chairs and more).

A celebrity career takes a lot of work. Wannabe Sims begin plying their trade in the karaoke bars and open-mic sessions of Studio Town. Taking the stage costs $10, but Sims get paid according to the number of applauding people in the audience.

As reputation grows, Sims acquire star points, which are also won by getting to know celebrities who wander around. These include Marilyn Monroe, Christine Aguilera and Avril Lavigne. Celebrities are chased by paparrazi photographers, but they're easy to spot because of the large gold star that floats above them. Players attempts to befriend celebs are hampered by their fickle nature; one minute they appear to be best buddies, the next they just don't want to know you.

As Freddie's reputation spread, he was able to expand into recording radio jingles. Though he got paid for this, the experience was somewhat dampened by the curmudgeonly nature of the engineer: "It's not your day, come back tomorrow", became a frustrating litany to our young protégé. Every attempt helps – a proto-celebrity should seize every chance to create fame. Once a Sim achieves three stars, it can begin to record tracks in the recording studio.

Fame conflicts with cosy domesticity – even-less-famous Sims will eventually attract the attentions of the Obsessed Fan. This annoying character haunts the house at night, tries to steal objects and rifles through the bins. And beware being intimate too near a window – one snap from the fan, or a sneak paparrazi can make – or break – a career. Sims with Livin' Large should consider adopting a dog, which will chase the obsessive away. Sims achieving stratospheric fame will be able to ask their butler to send that character – or anybody else – home.

## Macworld's buying advice

Looking back, you'll see we have enjoyed every expansion pack Aspyr has shipped so far. Each has its unique charms – though processor speed and memory requirements rise with each one installed, so be prepared to invest in a little more memory to prevent crashes. We really like this release, as it opens up a new area of gameplay by making players responsible for a Sims career – and the reactions from other in-game characters are highly amusing and unique. Existing Sims fans with a hunger for stardom need this upgrade.

**Jonny and Lisa Rocket**

Virtual Simon Cowell

### The Sims – Superstar

**Publisher:** Aspyr www.aspyr.com
**Distributor:** Softline, 01883 745 111
**Pros:** A humourous and well-executed add-on that massively enhances the game, restoring interest in the Sims once again.
**Cons:** Sign your social life away – The Sims will take it over, and the only chance you'll get to date a star is in your Mac. Order pizza now.
**Min specs:** Mac OS X 10.1/OS 9.2.2; 500MHz G3; 192MB RAM (additional 128MB recommended for OS X); 4MB VRAM; 1.1GB hard-drive space; QuickTime 4.1.2.
**Price:** £30 including VAT.
**Star Rating:** ★★★★/8.9

# Sound vision

## The inside track to producing professional video. By Derrick Story

**If the fundamentals are the concrete slabs and wood floors of your movie-making, the following tips and tricks are the spiral staircases, bay windows, and crystal chandeliers. You know you need the foundation, but you want the built-in Jacuzzi. This feature is about how-to do the fun stuff – quickly light a scene, capture sports action, survive a wedding, and convert your footage to QuickTime for Web publishing. It's an overview of why you were drawn to video in the first place: to make magic and impress others.**

**These tips and tricks are divided into three sections: outdoor shooting and action video, indoor situations and special events, and in the editing room. In the first two sections you'll see how to take lights, reflectors, microphones, monopods, and gaffer tape and use them to capture footage that you never thought was possible with a £500 camcorder. You'll finish by returning to the computer to learn about QuickTime and DVD production.**

### Outdoor shooting and action video

#### Tip 1: How to shoot action video like a pro

When thinking about shooting video, most likely you're thinking about recording motion – capturing someone or something moving. So, if recording motion is the essence of video, why do so many home movies make viewers queasy?

Many DV enthusiasts don't understand how to hold the shot. In other words, it's the subjects who are supposed to be moving – not the camera.

This error is particularly common in action videography, where the cameraman is hand-holding the camcorder and trying to follow the play at an event such as a football game. Obviously, you have to move the camera, or you'll never record any of the play on the field. But it's *how* the camcorder is moved that's important.

Most pros mount their camera on a tripod for this type of assignment. There's no better way to steady a camcorder than to secure it to a rock-solid tripod with a fluid head. But that probably won't be practical for much of the shooting you do. In the real world, people are already schlepping way too much stuff, and a bulky tripod could be the last straw.

You could instead spend a few hundred to a thousand pounds on a steadicam that lets you move freely while shooting – but that's unlikely

*continues page 64*

***In the zone***
*When shooting action shots, allow the subject to enter the frame, then pan the camera to follow her. Leave a "comfort zone" in front of the subject in the direction she's moving.*

too, unless you're selling films to Hollywood for some serious cash.

The real-world answer is a simple, compact, and effective accessory called a monopod. Essentially, it's a one-legged tripod. Even though they're extremely compact and easy to transport, monopods are an excellent tool for helping to hold shots properly. Your footage will improve immediately.

Once the camcorder is steadied, here are the basic shots you should be considering for action video:

**Entrance and exits** Anticipate the direction of the action, frame your shot, let the subjects enter, follow them for a short period, then let them exit the scene.

**Panning** Once the subject has entered the frame, you can follow their horizontal movement. Mounting the camcorder on a tripod or monopod is very important for this shot because jerky camera movement ruins the effect. Keep in mind the 180-degree rule while panning: never cross the imaginary horizontal line that comprises your field of view once you've begun the shot. If shooting at a football game, for example, the two goal posts are your 180-degree markers.

***Walk the walk***
*The walking interview lets you record the subject in motion while he talks while capturing the flavour of the environment.*

**Tilting** This is essentially the same as panning, but you're moving the camcorder in a vertical motion instead of horizontal.

So now you have a feel for how to shoot sequences. If you can, mount the camera on a monopod. If you don't have one, hold the camera as close as you can to your face, lock your elbows against your body, and pivot from the waist. Let the action enter the frame, pan for a short period of time, then let the subjects exit the scene (see "In the zone").

The zooming range of today's consumer camcorders is nothing short of amazing. Those lenses allow you to get close to the action for compelling shots.

Rule one is to use the zoom to frame the shot, then start recording. Generally speaking, try not to zoom during the shot. There are a few exceptions that will be covered later in this feature, but action photography is not one of them.

If you add zooming to the shooting technique described above, your sequences might flow like this:

- Zoom the lens to frame the shot.
- Anticipate the direction of the action and start recording just in front of it.
- Let the subjects enter the frame.
- Pan the camcorder to follow the subjects.
- Let the action exit the scene.
- Stop recording.

Then, for the next shot, start the sequence over.

Here's another trick to spice up your action videos. Take time to shoot cut-in and cut away footage. Shots such as the coach consoling a player or an ankle being tapped are valuable stock footage that you can use to break up the action and give your movie variety.

Don't forget to grab a couple of establishing shots – wider views of the scene that give viewers a feeling for the big picture. Sometimes you might want to add a few seconds of establishing footage at the beginning of the movie to set the scene. This isn't a hard and fast rule, but it's good to have this shot 'in the can' just in case it's needed during editing.

Most importantly, keep quiet while filming. You want to record the ambient audio of the environment, not yourself cheering for – or even worse, swearing at – the players on the field.

## Tip 2: Shooting the classic walking interview

One of the most compelling ways to shoot an outdoor interview is to record the subject while he is walking (see "Walk the walk", left). The camera holds the interviewee steadily in the centre of the frame while the background just rolls along. This camera technique is called tracking. When done right, an otherwise static shot becomes a vibrant scene in your production. You'll need the following tools for this shot:

- Wireless or boom mic.
- Wheelchair (to serve as your "dolly").
- An assistant or two.

Here's the basic setup. The audio must be captured through an external mic to avoid distracting sounds such as camera transport, grinding gears, and so on. Wireless mics are easiest for this shot and don't require an assistant to hold the boom. Booms, on the other hand, have the advantage of showing no equipment in the footage, such as a lavalier mic attached to the shirt collar of the subject. Boom mics require a set of extra hands, though.

The wheelchair, often referred to as a poor man's dolly, is the key component. The cameraman sits on the chair – most likely with their butt on the back of the chair and feet on the seat – and is pushed slowly and steadily by an assistant alongside the interviewee during filming.

This provides a quiet, continual transport that rolls along at the same speed that the subject is walking. Obviously, the smoother the surface is, the steadier the shot. So, when scouting locations for this type of scene, look for areas with relatively smooth surfaces that are wide enough to accommodate a wheelchair and subject moving side by side about four feet apart. An interesting (but not too busy) background is important as well. Pay attention to the position of the sun – which is why it's valuable to scout a scene at the same time of day that you're actually going to shoot it. Ideally, the sun will be illuminating the subject's face, but not shining directly in his eyes.

Used wheelchairs are easy to find at second-hand shops and garage sales. It doesn't need to be fancy – just roll smoothly and fold up for easy transport.

## Tip 3: Improving natural lighting outdoors

A basic rule of lighting is that the subject should be at least as bright as the background (unless you're creating a special-effect shot). You'd think this would be a given – that is until you really start studying the lighting of your scene. Even in bright sun, there can be distracting shadows on the subject's face, or the model may not be illuminated evenly. And backgrounds always seem brighter than you want them to be.

Strategically placed reflectors can help redirect the light on to the subject for better illumination (see "Light of your life" on page 65). This common practice involves mounting large reflective panels on light stands or hand-holding reflectors to follow the actor's movements.

Carting around large, rigid panels isn't practical for most hobbyists, but having a collapsible "photo disc" or two tucked away in the boot of your car can save the day. With an extra set of hands (or a stand to mount the reflector on), you can redirect sunlight to better illuminate your subject. Photo discs have reflectors on both sides – usually silver for maximum reflection and

### Pro tip

To limit the depth-of-field when shooting outdoors, try adding a neutral density filter to force the aperture to open up. These filters are available in a range of densities, usually one to four f-stops.

The darker the filter, the wider the aperture and consequently, the softer the background. If you already have a polarizing filter, that will work, too. These usually have two stops density.

gold to warm-up skin tones. When you place the reflector, keep in mind that it should be opposite the main light source for best effectiveness.

If you don't want to spend the extra cash on collapsible discs, a low-budget alternative is to go to the local office-supply shop and purchase a few sheets of white posterboard. This option isn't quite as portable or durable, but you can buy loads of it for the price of one collapsible disc, and it works just as well.

### Tip 4: How to overcome backlighting

One of the most common mistakes in amateur filmmaking is capturing footage of a backlit subject. Often this happens while panning, when a brightly lit background enters the frame. Everything in the foreground suddenly turns dark as the camcorder's metering system measures the bright sky or light streaming in through an open window (bottom right).

There are three basic ways to combat backlighting:

- Use a reflector or video lights to add illumination to the subject.
- Lock the exposure on your subjects so they don't silhouette when the camera pans to a backlit scene.
- Avoid this lighting all together.

Reflectors and video lights are helpful in backlit situations where you want to balance the background with the subject. A common scenario is one in which you place the camera on a low angle and shoot upward at the subject with a beautiful "fluffy-cloud sky" in the background. You want to capture both the sky and the subject.

To do so, you'll need to add enough light to your model with reflectors or video lights so that both the sky and the subject have about the same level of exposure.

If you don't care about preserving detail in the background, such as when filming in front of an open window, use the camcorder's exposure compensation control to lock in the exposure on the subject. Your model will remain adequately exposed, but the background will 'blow out' – in other words, become bright white with no detail (see "Backlighting").

You may have thought that option three, avoid backlighting all together, was a flippant suggestion. Actually it isn't. Once you understand what causes backlighting – when the background is much brighter than the subject – you'll find that simply changing the camera position to avoid it is the easiest solution of all.

### Tip 5: How to cope with wind

Wind is seldom the videographer's friend, especially when trying to record clean audio outside. Even a little breeze can create wind noise as it blows across the microphone and ruins the synchronized audio track. (See "Coping with wind", page 66).

The best solution for wind is to avoid it. If that isn't an option, investigate the different types of wind screens that might fit the microphone. Foam socks (sometimes called windsocks) usually cost less than £30 and protect the microphone from the elements, while still allowing recording of dialogue and ambient sound. For about twice the cost of foam socks, you can get high-performance fabric mesh screens. Sometimes these are referred to as "furs". Fabric mesh screens can deaden up to 20dB of wind noise, making them more effective than their foam counterparts.

If you find yourself in a windy situation without a windscreen, here's a trick you can use to salvage the ambient audio. Shoot the video, then find a sheltered place nearby where you can shield the microphone from the wind. Set the camcorder to record and capture a wind-free ambient audio track lasting as many minutes as you need to accompany the video.

When you're back at the computer in the editing room, remove the windy audio track that accompanied the video and replace it with the wind-free track. Remember, it isn't the sound of the wind itself you want to avoid; it's the static-like sound of the wind hitting the microphone that's distracting. If you find a place you can protect the mic but still capture the ambient sounds of the scene, you're in business.

## Indoor situations and special events

### Tip 6: How to corral colour temperature

You don't need a degree in physics to corral colour temperature indoors, but it helps to have a basic understanding of how different light sources can affect the appearance of video.

The vocabulary for the "hue of light" is in terms of colour temperature. Colour temperature is described in degrees Kelvin (K), in large part thanks to 19th Century British physicist William Kelvin, who heated a block of black carbon and noted the varying colour changes at different temperatures. You should note that degrees Kelvin doesn't have anything to do with the temperature of the environment in which you're shooting. Instead, it refers to the heat required to make Kelvin's block of black carbon change colour.

For the most part, we don't notice subtle colour shifts in our environment as we move from indoors to out because our optical nervous system compensates for the changes. Video camcorders attempt to do this also when set on automatic white-balance, but sometimes they need a little help to get the colour balance just right.

Here are a few reference points. The standard for daylight colour is 5,500K – the hue of midday sunlight on a cloudless day. Indoor lighting is usually in the 3,200K neighbourhood, or the equivalent of a very bright tungsten light or quartz bulb. These colour temperatures are constantly changing both inside and out. For example, when the sun rises, it's only about 1,800K, climbing to over 5,000K at noon, then declining again to less than 2,000K as it sets.

There are times you might want to adjust colour balance outdoors, such as on a cloudy day when the hue is coolish, or has a blue cast. But most of the real colour headaches are indoors because of mixed lighting.

The advantage of outdoor lighting is that there's only one light source to contend with – the sun. Your camcorder, when set to automatic white-balance, doesn't even work up a sweat dealing with this situation. It just makes the correction. If you want to override the camcorder's decision, you can work with the colour adjustment icons such as "cloudy" or "daylight." A single light source makes things much easier.

Indoors can be a different matter. You might have fluorescent tubes overhead, video lighting directed at the subject, and daylight streaming in through the window.

*continues page 66*

***Light of your life***

*Portable folding reflectors, often called Lite Discs, help you redirect light both inside and out. In the top photo the subject is displaying the Lite Disc, but no light is being redirected. In the bottom image you can see a noticeable difference in the model's clothing and skin tones due to the reflected light.*

***Backlighting***

*Watch out for backlighting! In the top figure, the camcorder set its exposure according to the light coming in the window, which underexposed the subject being interviewed. In the bottom figure, exposure was locked in on the background, but light was added to the underexposed subject to balance the overexposure.*

***Coping with wind***
*Even a little wind can interfere with capturing clean sound outdoors.*

Entire books have been dedicated to coping with this problem, but a few hints can help you capture footage without problems.

**Limit the light sources** If you're taping an interview or some other scene where you don't need to capture much background information, set up the video lights and turn down the other sources. If next to an open window, look closely at how that light is affecting the scene. Is it causing a bluish tint in the shadow areas? Either draw the shades or warm it up by adding a tungsten source. Generally speaking, though, the fewer different types of lights you have to deal with, the fewer headaches you'll have.

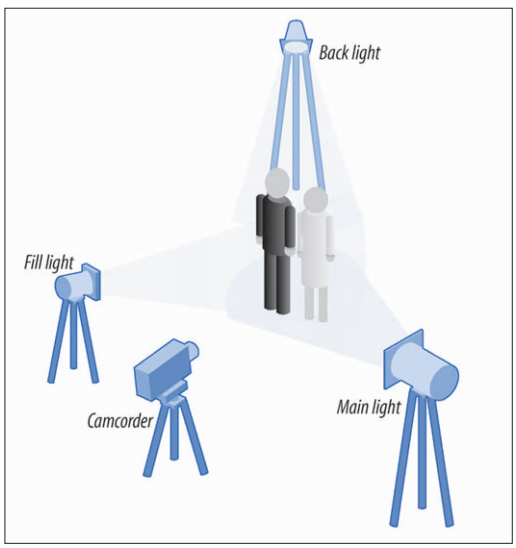
**Use the camcorder's white balance settings** Before you start shooting the actual footage, take a few moments to play with white-balance settings to see which looks best on your LCD monitor. If the dominant light source is overhead fluorescent tubes, for example, you might have a choice of fluorescent white balance settings (to adjust for cool white tubes, daylight tubes, and so on). Try the different settings and see what looks best. If you can't get the hue right, try using the manual white-balance adjustment.

**Consider gels for tricky mixed-light situations** A typical mixed-lighting problem is shooting indoors with fluorescent lighting above. Instead of turning off all those lights and losing the ambience of the setting, add a 1/2 CTB colour-correction gel to the tungsten lights, then use your camcorder's manual white-balance adjustment to correct for the overall scene. Both subject and background should have a pleasing hue.

**Learn to identify different light sources and pay attention to how they look in your LCD monitor** The biggest challenge for many people is learning how to see the environment as the camcorder sees it, not as your eyes and brain perceive it. Often a few small adjustments can make a world of difference in the final footage. Think like a camera, and your movies will look better.

## Tip 7: How to choose the right video light setup

***Three-point lighting***
*Three-point lighting combines main, fill, and backlights for a flattering rendering of the subject.*




When you can shoot with natural light, do it! Artificial light for videography increases the pain quotient substantially. But there are certain types of scenes, such as the Panorama style of interview, where Mother Nature just won't get the job done.

But what kind of lights should you consider? You have lots of choices here, but your pocketbook will probably be the ultimate guide. Here are some of the more popular lighting options:

**Photoflood** These tungsten lights are some of the most affordable. They aren't beautiful, and they emit lots of heat, but photofloods get the job done.

**Quartz (3,200K)** Often these kits provide you with a 'key' light (around 600 Watts) and a 'fill' light (around 250 Watts), plus stands and reflectors. Quartz lights are brighter and more compact than photofloods, but they get just as hot.

**Mini Cool-Lux (3,200K)** These brand-specific, tiny quartz halogen bulbs are designed to burn much cooler than traditional quartz and photoflood lamps, and typically produce more light at lower voltages, too. Kits cost a bit more than quartz and photoflood, but they are often worth the extra money for their compactness and reduced heat output.

**HMI lights (Halide Metal Iodide – 5,600K)** Flicker-free and daylight-balanced, HMI lights are near the top of the lighting food chain in terms of quality and cost, but be prepared for a four-digit price tag per light. Why? HMI bulbs contain mercury vapour, argon gas, halogen, and metal oxides, and require a state-of-the-art electronic ballast (similar to regular fluorescent lights, but more sophisticated) to control their cycles. They produce four times the light of tungsten bulbs of the same wattage, and they burn cooler because less energy is wasted as heat. They are powerful, flexible light sources indoors, but they can cost more than the camera you're using to capture the action.

**Video fluorescent lighting (3,000 to 5,000K)** The technology for video fluorescents has improved in recent years (primarily due to new-generation electronic ballasts), enabling this source to gain popularity in television studios and other pro settings. Unlike tungsten light bulbs that produce 25 per cent light and 75 per cent heat, fluorescents produce only about 5 per cent heat, and the rest is light. This provides a more comfortable shooting environment. Additional benefits include softer light (no filament) and lower energy costs.

What's the best lighting for you? If portability isn't a priority and you have a moderate budget for this investment, today's fluorescent video lighting is sure to please. For the videographer on the go, Mini Cool-Luxes are a decent combination of price and portability.

If, however, you spent the entire video budget purchasing that new DV camcorder, consider a trip to the hardware store. Now that you understand the different types of bulbs and the illumination they produce, you'll look at the "shop accessories aisle" in a whole new... light.

## Tip 8: How to master three-point lighting

Now that you have your lights, how to arrange them? The classic approach uses three points of illumination: main, fill, and back. It's endured because it's easy to set up, flattering for subjects, and appropriate in a wide variety of situations, including training videos, interviews, cooking demonstrations, and more.

Before throwing on the switch, however, you'll need a few basic accessories to complete your setup:

**Light stands** Get your hands on two seven-foot stands for the key and fill lights, and a shorter backlight stand. For most folks they're a once-in-a-lifetime purchase.

**Reflectors** Collapsible light discs are nice,but pricey. If you have them, bring them along. You can also use homemade foam core panels. Better yet, paint one side black and you have a tool to block light as well as reflect it.

**Clamps, clothes-pins, and gaffer tape** It would be great if reflectors, cords, drapes, and loose clothing stayed exactly where you wanted them to, but they don't. Have a good supply of these items in your bag of tricks.

**Extension cord and adaptors** You want to shoot in this corner, and the closest available outlet is in the other. Include at least one extension cord and a couple of three-to-two prong electrical outlet adaptors.

**Lighting gels** Depending on the type of lights you're using, bring a few amber and blue gels that warm and cool the final lighting for the scene. Diffusion gels also come in handy to add softness to the light.

**Face powder, Kleenex, and comb** If you're going to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subject people to shooting in front of hot lights, help them look good doing so. Face powder helps eliminate shine on noses, foreheads, and receding hairlines.

So how do you take this mish-mash of bulbs, stands, clamps, and cords and arrange them to create beautiful lighting for your scene? Easy.

Take your brightest light, which is often referred to as the key or main light, and place it to the right of the camcorder, about three feet away, pointing toward the subject. (See "Three-point lighting, page 69.)

Place the weakest light behind the model. You can position this light low, angling upward toward the subject's head, or it to the ceiling behind the model, pointing downward toward the back of the head. This is called the back light, and its role is to create separation between the subject's head and the background.

Put the model in position and turn on the key and back lights. Examine the scene in your LCD monitor and note the shadow area on the model's face. Now place a medium-intensity light on the shadow side of the subject, directed at the dark area of the face. This is the fill light.

Review the lighting again in the LCD monitor. If you need to, adjust the fill light or substitute a reflector for the light to get the look you want. If the key light is too harsh, diffuse it by bouncing the light off a reflector on to the model.

Remember the rule of thumb for portrait lighting: the bigger the light source and the closer it is to the subject, the softer its illumination. By bouncing light off a large reflector, you've doubled or tripled the size of your source (but not its intensity). The closer you move the reflector to the model's face, the softer the light will be. This is very flattering because it softens lines in the face and gives the complexion an overall smoother appearance.

Once satisfied with the position of the lights, note the colour temperature of the scene as it appears on your LCD. Is the light too cool, giving the model bluish skin? If so, you should add amber gels to one or more lights until you get the hue you want.

Commercial reflectors such as the collapsible discs often have a gold side in addition to the standard white or silver. By bouncing the key or fill light off the gold reflector, you can warm-up the quality of the light, creating healthier skin tones.

Before you start rolling the tape, take one last look at your subject. Is his hair combed? Do you see any shiny spots on his forehead or nose? Is his clothing hanging properly? Make the final adjustments, then start taping.

If you're using photofloods or quartz lighting, you'll need to take a break after 15 minutes or so of shooting. Otherwise the heat will begin to take its toll on your model. Use this opportunity to review some of the footage to make sure it's looking the way you want. If you have to make a change, it's better to start over now and get it the way you want than to discover the problem while helplessly viewing it the next day in the editing room.

## Tip 9: How to survive special events

You've seen it happen before: a friend is getting married and would like "just a little video of the ceremony and reception". Suddenly all eyes are on you. "You have a camcorder, don't you?" You nervously say yes. That was the easy part. But now, how do you survive this special event and deliver decent video once it's over? Here are some survival techniques. The following tips also apply to graduations (which are weddings without the reception), birthday parties (weddings without the ceremony), and 50th-anniversary celebrations (weddings without the honeymoon).

Preparation begins long before the event unfolds. Here's how to get organized prior to the wedding and shoot well once the action starts.

**Find out what's happening and when** Organized weddings will have an itinerary or a shot list. Request a copy. This will help you stay ahead of the action during the event. You want to be in position and let the action come to you. Remember the basic shooting sequence outlined in Tip 1: How to shoot action video like a pro – let the couple enter the frame, do a short pan, then let them exit the frame.

**Attend the rehearsal** Bring your itinerary with you and make notes during the rehearsal. Don't be afraid to ask questions like "Is it OK if I stand here during the exchange of vows?" If the photographer is there, introduce yourself. The two of you can work out a game plan so you aren't in each other's way during the event.

**Find an assistant** True, you aren't shooting Four Weddings and a Funeral, but even for small projects, an assistant is invaluable. This person can help you stay ahead of the itinerary, gather groups together, hold the microphone, and dash off to the car for that missing adaptor you left in the boot. And when the wedding is over, be sure to send a thank-you note with a thoughtful gift as a token of your appreciation.

**Prepare your equipment** Since weddings get hectic, make sure you have extra videotape and batteries in your pockets. It's a good idea to format your tape first so there's no chance of breaking the timecode during the heat of the action. Bring a tripod for the ceremony and a monopod for afterward. You should have a portable video light with you, but pray that you don't need to use it. An external microphone is critical for decent audio during the reception. A wireless mic on the groom during the ceremony should be good enough to capture the exchange of vows.

**Dress appropriately** Yes, a tie-dye T-shirt expresses your free and independent spirit. But a coat and tie or a dress says you mean business. First, get their respect – then get the shot.

**Don't be a nuisance** Resist the urge to direct, and herd. Don't ever cut in front of the action when changing positions. Stay out of the still photographer's way. Quietly go about your work so people forget about you. Then you'll get the great footage (see "Capture the moment").

**Capture people talking to each other** Try to record moments that are actually happening, not ones you create. If you want to interview guests, have your assistant stand to your side and lead the discussion. That way interviewees won't be looking directly in the camera.

**Use good camera technique** Hold your shots steady, don't zoom while the tape is rolling, and pan slowly. If you have to change positions, stop the tape, relocate, then start rolling again. Adhere to the five Cs of good camera work: camera angles, continuity, cutting, close-ups, and composition.

**Edit your work** Don't just dump the day's footage onto VHS or DVD and hand it over to the couple. You don't need anything fancy here – just a few titles and simple cuts. Tell the story of the day simply. Around 20-30 minutes is more than long enough.

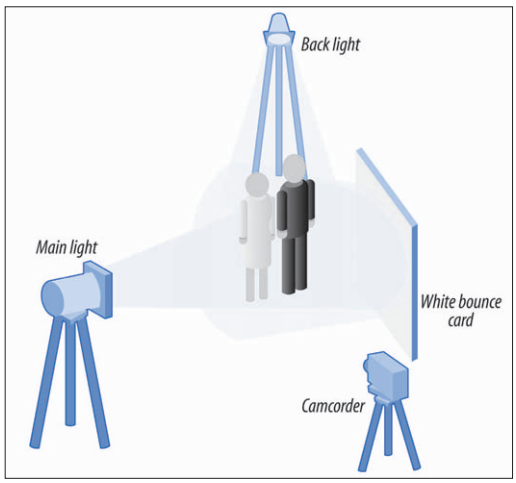
**Try to deliver the movie soon after the event is over** Delight the couple by having a DVD waiting for them when they return from their honeymoon. If you shoot clean footage and keep your editing simple, you shouldn't need too much time in post-production. MW

***Capture the moment***
*At special events, the best footage is recorded when the subjects aren't aware of the camcorder. For this sequence, the cameraman stood on a chair to get an engaging angle of the bride dancing with her father.*

### Pro tip

Spectacle-wearers cause challenges when arranging lights. You'll probably have to raise the key light higher than usual to eliminate reflections in the lenses. If that doesn't work, move it a bit more to the side of the subject. Have the model keep her chin slightly lowered.

This helps with the reflections, and gives the appearance of widening the subject's eyes for an altogether more flattering look.




***Using a fill card***
*You can substitute a fill card or collapsible disc reflector for the fill light. The lighting is less even with this setup, but many filmmakers like the more-pronounced shadow area resulting from this configuration.*

secrets how-to

# Text massage

## Importing Word text into QuarkXPress needn't be tedious. By David Blatner

Hamlet muttered in frustration, "Words, words, words.". But at least he didn't have to deal with getting all those words out of Microsoft Word and into a page-layout program. Word-processing and page-layout applications don't always play together nicely, leaving us with baffling characters and incorrect formatting that can take hours to fix.

Those of us who perform this stunt daily rely on a bag of tricks that can ease the passage of words from one program to another. In this article, I'll cover several easy steps for preparing your Word files to flow into another program. Then I'll share a few in-depth techniques for massaging your text into shape once it has been placed in pages. Some tricks involve a bit of code, but fear not: a firm grasp of these techniques will lead to fewer headaches when you import Word files.

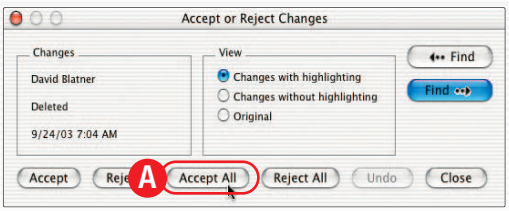
While this article focuses on using Word X with QuarkXPress 6.0, most of these techniques also apply to previous versions of those programs and to moving text from Word to Adobe PageMaker or InDesign.

However, if you do use one of these programs, you'll have to adapt a few of the details (for instance, if you use InDesign, you'll have to insert "InDesign tagged text" wherever I indicate "XPress tags").

### 1 Prepare your Word file

**The first step in successfully importing Microsoft Word documents into a page-layout program is to prepare the Word document properly. Taking a moment to clean up your file can save hours later in the process.**

I love Word's Track Changes feature, which uses underlines and strike-through formatting to track additions to and deletions from a file. But you have to make sure you get rid of all revision marks before you import text into QuarkXPress. Select Tools: Track Changes: Accept Or Reject Changes, and click on Accept All (A). Otherwise, text deleted in Word will reappear in XPress.

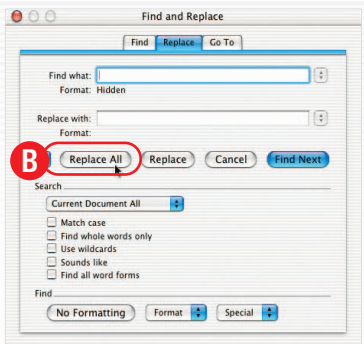



Similarly, you should delete all other extraneous information from the file, including comments, hyperlinks, bookmarks, hidden text, frames, and embedded graphics. At best, these elements disappear upon import; at worst, they'll confuse XPress, causing errors and untold misery. The program can't import anchored (or in-line) graphics or frames, so you should delete those, too.

To delete graphics, select Edit: Replace and type ^g in the Find What field. Leave the Replace With field blank, and click the Replace All button. If there are hyperlinks in your document, select the whole document (press ⌘-A) and turn off all the links by pressing ⌘-shift-F9. This shortcut has the additional benefit of also unlinking "calculated fields" (such as page numbers and date fields) from their underlying codes, which can sometimes confuse XPress upon import.

To delete hidden text and comments, first turn on Hidden Text in the View panel of Word's Preferences dialog box (Word: Preferences), and then select Edit: Replace. Keeping the cursor in the Find What field, select Font from the Format pop-up menu (you may have to click on the down triangle in the dialog box to see this menu); in the Find Font dialog box that appears, turn on the Hidden option. Click OK, and then – after making sure that both the Find What and the Replace With fields are blank – click Replace All (B).

Finally, make sure your paragraph and character styles in Word are applied consistently throughout the document. It's often easier to apply styles in Word than in XPress (as we'll see in step 3). Your styles should have exactly the same names as those in your XPress file – otherwise, XPress won't know how to format your text upon import.



## 2 Save the Word document

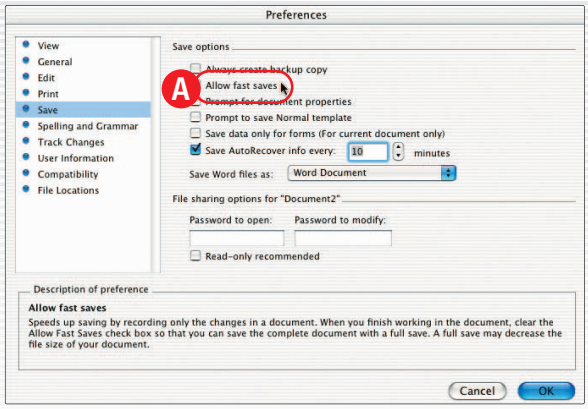
**Saving a file out of Word seems like such a simple task, but remembering to take a few precautions can make or break your workflow at import time.**

Everyone who prepares Word files that will end up in a page-layout program must do one simple thing: in the Preferences dialog box (Word: Preferences), select the Save panel and turn off the Allow Fast Saves feature (A). Sure, it'll take about four microseconds longer to save your file, but fast-save files are notorious troublemakers when it comes to XPress.

Theoretically, XPress should be able to import files from both Mac and Windows versions of Word, but I recommend opening Word for Windows files in the Mac version of Word and using Save As to create a new file. This often cleans up weird font or character-mapping problems, such as when one character turns into another (quotation marks, en dashes, and other high-ASCII characters are notoriously susceptible to these glitches).

In fact, even if the file has always lived on the Mac, I like choosing Save As to create clean version of it, without any gunk that may have crept in over the course of multiple saves.

Many users report having trouble (mostly in the form of incorrect styles being applied) when importing native Word files into XPress. The solution is usually to save files in Rich Text Format (RTF), which is an option in the Format pop-up menu in the Save As dialog box. Note, however, that while



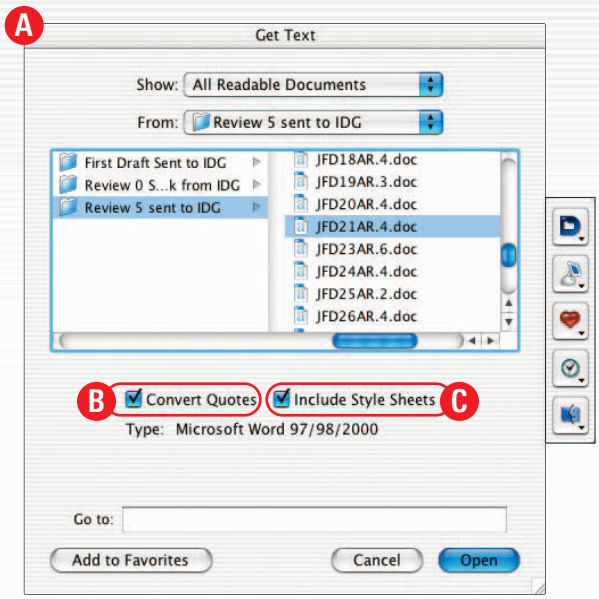

QuarkXPress 6.0 can import RTF files, earlier versions for the Mac can't do it without the help of a commercial XTension.

No discussion of saving Word files for XPress would be complete without a mention of the qXport macro for Microsoft Word ($99; **www.bitmix.de/english/**). This macro can perform everything I covered in step 1, and then it can convert your Word document directly into XPress tags (see step 5), stripping out irrelevant formatting and providing cleaner results than XPress's own Word import filter does.

## 3 Import the file

**It's time to import your file into XPress. Paying attention to a few key options can make all the difference in what you end up with.**

While you can copy and paste text from Word to XPress, I don't recommend it – some characters (such as bullets) get messed up, and all text formatting is lost in translation. Instead, use File: Get Text in XPress (A).




When you import Microsoft Word documents, you should turn on both the Convert Quotes (B) and Include Style Sheets (C) options in the Get Text dialog box. Convert Quotes replaces straight quotation marks (") with true quotation marks (“) and swaps out double hyphens (--) for en dashes (–).

Include Style Sheets tells XPress to import any paragraph and character styles you've used. If you turn off this option, XPress ignores your styles, applies whatever style is currently selected in the text box, and then places Word's formatting on top of that style as local formatting. It's a recipe for disaster and a royal pain to fix, so do yourself a favour and leave this option on.

When you click Open, XPress compares the styles in the Word document with the styles in your XPress document. Any styles with the same name trigger the program to ask you which style definition you want to use (“Normal” always triggers this question). In almost every instance I can think of, you'll want to choose Use Existing (D), which tells XPress to ignore Word's definition and use the XPress document's. Check the Repeat For All Conflicts option so that your choice applies to all the styles and you don't have to click on the Use Existing button repeatedly.

As long as the style names are the same, XPress strips away Word's style definitions (which were designed to make text easy to read on screen) and uses XPress's style definitions instead (which were designed to make text look good in print).

Some text never comes in the way you wish it would. For example, XPress can read footnotes in your Word documents, but it turns them into endnotes (the notes are placed at the end of the story rather than at the bottom of the same page). Similarly, XPress strips out automatic bullets and numbers, which can cause no end of hair-pulling. Saving in RTF fixes this problem, but for some reason, footnotes don't seem to work reliably in RTF.

By the way, Quark occasionally updates its Word filter, so check out the company's Web site (**www.quark.com**) every so often.

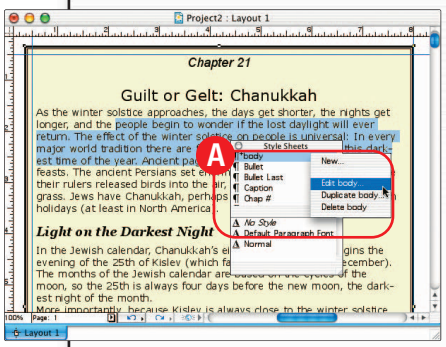
MS-Word 6-2000 Filter
This Paragraph Style Sheet is already in use. How would you like to resolve the conflict?
Rename
Auto-Rename
Use New
Use Existing
D
Repeat For All Conflicts
Existing:
Name: Normal; U.S. English; Alignment:Left; No Drop Cap; Left Indent:0"; First Line:0"; Right Indent:0"; Leading:0"; No Rule Above; No Rule Below; Space Before:0"; Space After:0"; Do not keep with next ¶; Tabs: None ;
New:
Name: Normal; U.S. English; Alignment:Left; No Drop Cap; Left Indent:0.71"; First Line:0"; Right Indent:0"; Leading:0.153"; No Rule Above; No Rule Below; Space Before:0"; Space After:0"; Don't Lock to

*continues page 74*

## 4 Clean up local formatting

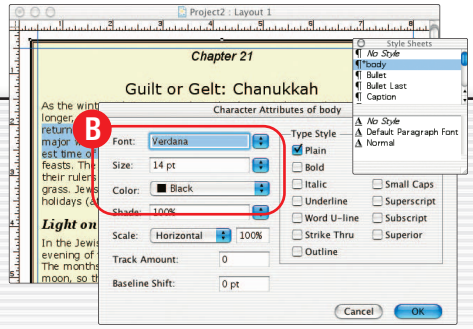
**When I send a Word file to someone to edit, the text invariably returns in a different font or size or even colour. The editor has applied local formatting on top of the paragraph or character style's definition, perhaps to make the text easier to read on screen. But it makes my job more difficult. To solve this sort of problem, you need to strip out that local formatting.**

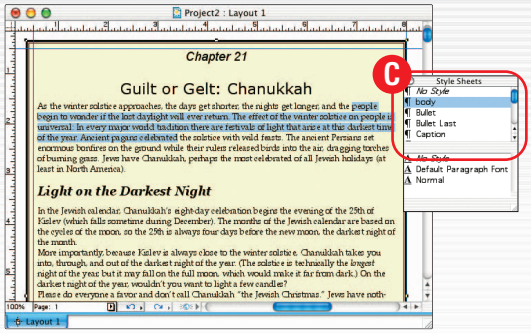
QuarkXPress tells you when your cursor is placed in text that has local formatting by displaying a plus sign next to the style name in the Style Sheets palette. When you import a Word file that has local formatting (such as a font or size change) applied throughout, the plus sign never goes away, and no matter how often you try to apply or reapply a style, the local formatting remains.




You can get rid of a paragraph's local formatting by option-clicking on a style name in the Style Sheets palette (which is a shortcut for applying No Style and then reapplying the style (A)). This is an easy way to fix headings, but because it wipes out all formatting – such as italics added for emphasis – it's less appropriate for body text.

Instead, first change the paragraph style so that it contains the formatting you want to remove (B). For example, if someone applied 14-point Verdana to all the text, then change your style definition in XPress to be 14-point Verdana, too.




Next, change the style definition back to what you want it to be (whatever it was before you chose 14-point Verdana) (C). Now all the text should be formatted properly: you've gotten it to be the proper typeface and size, but you've retained the italic local formatting as well.

Also, XPress often imports more styles than you've actually used (it almost always adds the Default Paragraph Font character style). You can delete unused styles in XPress by choosing Edit: Style Sheets and then picking Style Sheets Not Used from the Show pop-up menu. Now select all the styles in this list (click on the first name and then shift-click on the last name in the list) and click Delete.

## 5 Text massage

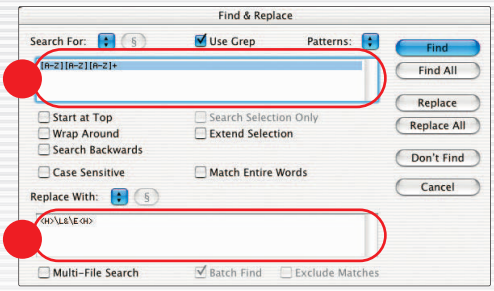
**In the life of a page designer, there's almost nothing worse than converting words from the all-caps style to the small-caps style. That's because you have to manually retype the word in lowercase letters and then apply the small-caps style to it. Here's how to do it faster with XPress Tags and BBEdit.**

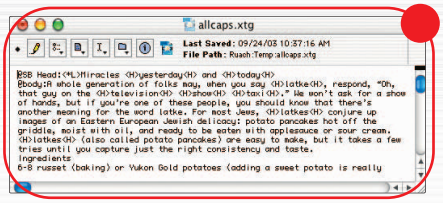
XPress's Find/Change palette is fine, but you can do much more powerful search-and-replace tricks by exporting your text as XPress tags. Place your cursor in a story; then choose File: Save Text and select XPress Tags from the Format pop-up menu (A).

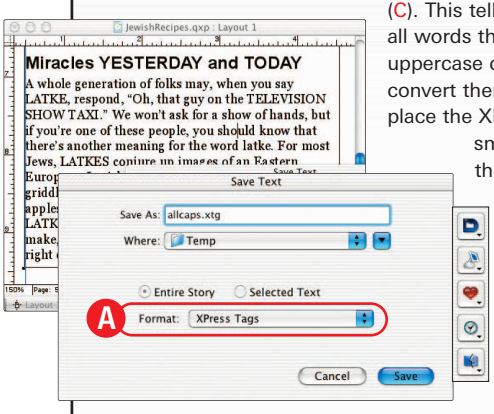
You can open your XPress Tags file in any text editor that supports grep (Global Regular Expression Parser), such as BBEdit, TextWrangler, or the free-but-unsupported BBEdit Lite, all from Bare Bones Software (**www.barebones.com**).

In BBEdit's Find & Replace dialog box (select Search: Find), click on the Use Grep option and then type [A-Z][A-Z][A-Z]+ in the Search For field (B) and <H>\L&\E<H> in the Replace With field (C). This tells BBEdit to look for all words that have three or more uppercase characters in a row, convert them to lowercase, and place the XPress tags code for the small-caps style around the result. Click on the Replace All button to make the change.

Now save your file (I like using Save As to give it a different name in case I need to edit the original) (D).





JewishRecipes.qxp : Layout 1
Miracles YESTERDAY and TODAY
A whole generation of folks may, when you say LATKE, respond, "Oh, that guy on the TELEVISION SHOW TAXI." We won't ask for a show of hands, but if you're one of these people, you should know that there's another meaning for the word latke. For most Jews, LATKES conjure up images of an Eastern
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Where: Temp
Entire Story
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Format: XPress Tags
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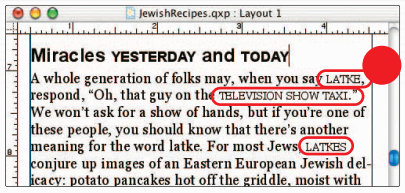
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icacy: potato pancakes hot off the griddle, moist with

Go back to XPress. Delete the text you exported and use File: Get Text in XPress to import the tagged file in its place. Make sure you turn on both Convert Quotes and Include Style Sheets; otherwise, you'll see the XPress tags instead of the WYSIWYG text. The resulting words will have the appropriate small caps (E).

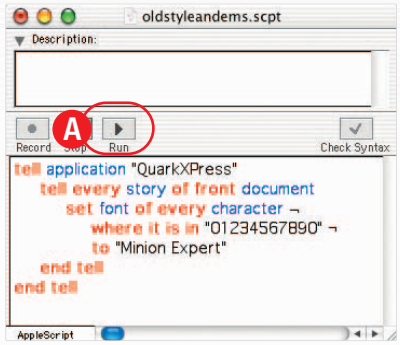
## 6 Automate boring tasks

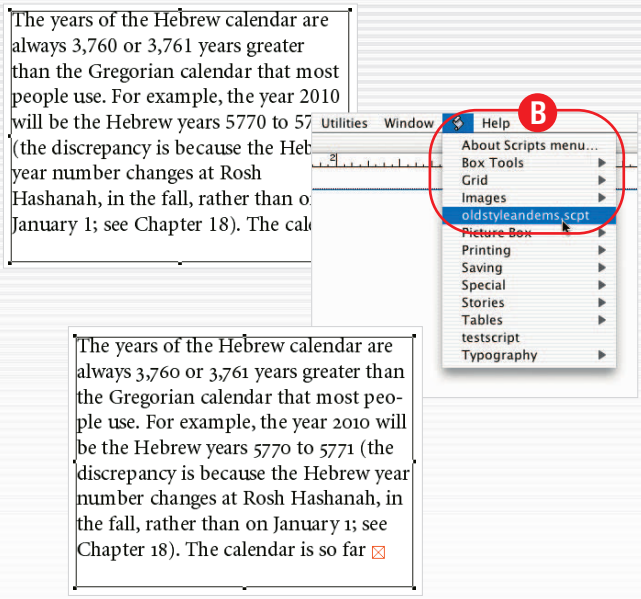
**If you ever catch yourself performing the same steps over and over, stop and ask yourself whether you can perhaps automate them with a macro or an AppleScript. For instance, it's tedious to find all the numbers in a document and change them to an Expert font just to get old-style numerals. Here's a way to do it quickly.**

Launch Script Editor, which is in the AppleScript folder inside your Applications folder. (In OS 9, it's in the Apple Extras folder.) Type the following into the editor:

```
tell application "QuarkXPress"
    tell every story of front document
        set font of every character ¬
            where it is in "01234567890" ¬
            to "Minion Expert"
    end tell
end tell
```

You can type the ¬ character by pressing option-L; it just tells Script Editor that the line of code continues after the return. When you have a document open in QuarkXPress, click the Run button (A). However, note that you'll get an error message unless there's at least one text box in the document that contains a number. Also, if you don't happen to have Minion Expert installed on your system, change this to an Expert font with old-style numerals that you do have on hand.





The years of the Hebrew calendar are always 3,760 or 3,761 years greater than the Gregorian calendar that most people use. For example, the year 2010 will be the Hebrew years 5770 to 57
(the discrepancy is because the Heb
year number changes at Rosh Hashanah, in the fall, rather than o
January 1; see Chapter 18). The cal
Utilities
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Printing
Saving
Special
Stories
Tables
testscript
Typography
The years of the Hebrew calendar are always 3,760 or 3,761 years greater than the Gregorian calendar that most people use. For example, the year 2010 will be the Hebrew years 5770 to 5771 (the discrepancy is because the Hebrew year number changes at Rosh Hashanah, in the fall, rather than on January 1; see Chapter 18). The calendar is so far

Once you're satisfied that the script works, return to Script Editor and save it in the Scripts folder inside the QuarkXPress folder. Now you'll be able to run the script anytime from the Scripts menu in XPress (B).

You could have performed this conversion using XPress tags too, but AppleScript offers three benefits. First, it lets you convert the numbers in all the text boxes throughout your document in one fell swoop rather than one text box at a time. Second, once you've saved the script in the Scripts folder, it's easy for anyone (even someone unfamiliar with your system – a temp worker, for example) to run it. Finally, it gives you a good chance to use one of the coolest technologies on the Mac.

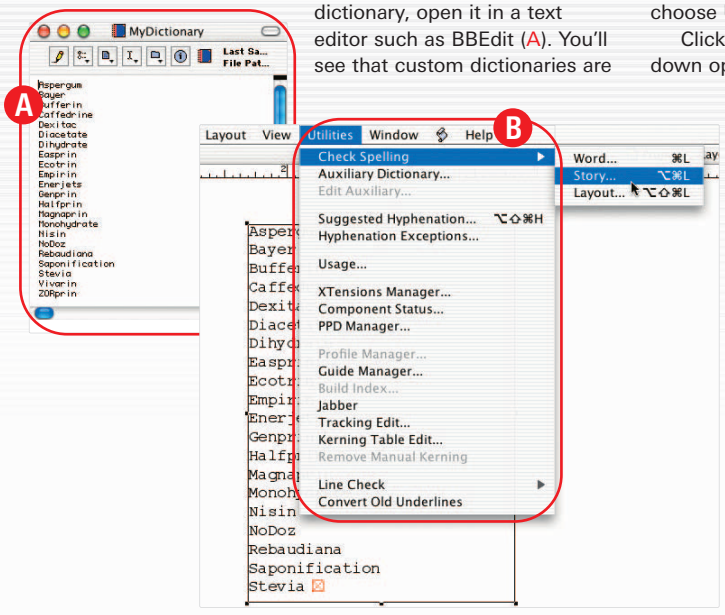
## 7 Converting word dictionaries

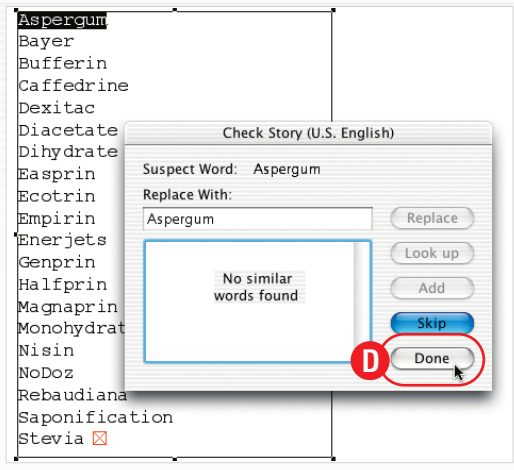
**Do you find yourself with a last-minute need to check the spelling of your XPress files and wish you had your custom dictionaries from Word? No problem – you can convert your custom Word dictionaries to XPress auxiliary dictionaries.**

To convert a custom Word dictionary, open it in a text editor such as BBEdit (A). You'll see that custom dictionaries are just lists of words in alphabetical order. Select all the text from this file and copy it to the Clipboard (⌘-C). Switch to XPress and paste the list (⌘-V) into any empty text box.

To add all these words to an XPress auxiliary dictionary, you must first create a new auxiliary dictionary (or select one you've already made) by choosing Utilities: Auxiliary Dictionary. Then, with the text cursor in the list of words, choose Utilities: Check Spelling: Story (B).

Click OK in the Word Count dialog box, and then hold down option and shift while clicking the Done button in the Check Story dialog box (C). This tells XPress to add all the suspect words to the auxiliary dictionary.



# Scan for iPhoto

How to import reflectives and negatives into iPhoto. **By Jim Heid**

You love your digital camera and the convenience of iPhoto. But the past haunts you. You have boxes of prints, negatives, and slides that you haven't seen in years. If you could get them into iPhoto, you could organize them into albums and share them through Web galleries, slide shows, books, or DVDs.

To bridge the gap between print and pixels, you'll need a scanner. I'll show you how to pick the right one, and I'll share strategies for incorporating those old photos into your new digital workflow.

## Scanning the options

Before you run out and buy a new scanner, take stock of what types of media you need to digitize. Not all scanners are ideal for every task.

**Piles of prints** If you'll be scanning printed photos, a flatbed scanner is your best bet. When you place a photo facedown on the scanner's glass, a sensor glides beneath it and captures the image. If you have a closetful of photos, you may want to look for a scanner that supports a document feeder so you can scan multiple photos without having to hand-feed the scanner.

Some of Hewlett-Packard's flatbeds in the £200 to £300 range include photo feeders that can handle as many as 24 4-x-6-inch prints at a time (**www.hp.co.uk**). Other scanners accept optional document feeders that generally cost between £80 and £200, depending on the model. Just be sure to verify that the document feeder can handle photos – many can't.

**The film is better** Although you can get decent images by scanning prints, you'll get significantly better results by scanning the original film. A print is one generation away from the original image, and it may have faded with time or been poorly printed to begin with. Worse, many photos are printed on linen-finish paper, which has a rough texture that blurs image detail when scanned.

Many flatbed scanners include a film adaptor for scanning negatives or slides. With some, the adapter snaps onto the scanner's bed – but this means finding and installing the adaptor each time you want to scan a neg. A convenient option is a scanner with the adaptor built into the lid, such as Epson's £199 (inc VAT) Perfection 3170 Photo (**www.epson.co.uk**). The Perfection 3170 can scan negatives and mounted slides, and unlike many flatbeds, it can scan medium-format film such as the 120 format popular in old cameras.

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## Faded memories

Old photos do fade away, acquiring a blue or red tint as their dyes, well, die. If you have patience and a good eye for color, you can repair an old photo's color with Photoshop's built-in tools. But for the rest of us, there's an easier alternative: the $49 Digital ROC plug-in for Photoshop and Photoshop Elements (**www.asf.com**). Developed by Applied Science Fiction (a Kodak subsidiary), Digital ROC does an amazing job of improving faded photos. Just look at what it did for this 1955 slide of my dad in a TV studio.

Equally impressive are the company's $79 Digital GEM plug-in, which sharpens images and reduces grain and digital artifacts, and the $49 Digital SHO plug-in, which optimizes brightness and contrast. You can download free trial versions of all three plug-ins before you buy.

# Digital hub tip of the month: buds-u-like

Few iPod users offer high praise for the included earphones. As far as bundled earphones go, they aren't the worst – but they certainly leave much to be desired.

People willing to make a modest investment in better sound should check out Shure's £90 (including VAT) E2c (**www.shuredistribution.co.uk**). These in-ear earphones have a high-performance driver for optimal sound quality, and they come with three sizes of disposable foam sleeves and three sizes of flexible rubbery sleeves to ensure a perfect fit. So music stays in and noise stays out – you get cleaner sound at lower volume without outside interference. (The earphones work so well that the company suggests that you not wear them while running or biking near traffic.)

**Jonathan Seff**

**'If planning to print scans on an inkjet photo printer, you can get fine results with a resolution of between 180 and 240dpi. If ordering photographic prints from scans, scan at 300dpi.'**

**For the film enthusiast** If you've managed to keep the negatives for a majority of your old photos and you want the best possible image quality, a better choice may be a film scanner. Although not as versatile as a flatbed scanner, a film scanner provides much sharper scans of negatives and slides. This quality will cost you: film scanner prices start at about £300 and rise steeply from there. (However, judging from all the film scanners for sale on eBay, I suspect that many people buy them, scan their photos, and then sell the scanners to recoup some of their investment.)

## Scanning right

Scanners offer an intimidating number of features and choices for optimizing image quality. The most important of these is resolution, the number of dots per inch (dpi) the scanner uses to represent an image. As long as you capture enough information, you can do a lot of fine-tuning in iPhoto or Adobe Photoshop Elements, which is bundled with many scanners (**www.adobe.co.uk**).

Volumes have been written about scanning resolution, but it boils down to a simple rule of thumb: if you plan to print scans on an inkjet photo printer, you can get fine results with a resolution of 180 to 240dpi. If ordering photographic prints from scans, scan at 300dpi. Scanning at more than 300dpi won't usually improve quality – but it will definitely use more disk space.

**Scanning for Ken Burns** If you plan to apply iMovie's Ken Burns pan-&-zoom effect to an image, you'll want a high-resolution scan. A 300dpi scan should have enough data to allow for tight zooms, but you may want to experiment to find the best resolution for a specific image and zoom setting.

**Scanning with cropping in mind** Similarly, if you plan to crop out unwanted portions of an image, scan at 300dpi – or even higher if you plan to crop dramatically. Cropping discards pixels, effectively lowering an image's resolution, so the more data you have to begin with, the more cropping flexibility you have.

**Format strategies** Which file format should you use for saving scanned images? iPhoto works best with JPEG files. However, the JPEG format is lossy, which means it sacrifices quality to save disk space. If this is the last time you plan to scan those photos, you may want to get the highest-quality image possible. For this, a TIFF image is better.

When archiving my old slides, I scanned at 300dpi and saved the images as TIFF files. Then I used Photoshop Elements' Batch feature to save a second set of photos in JPEG format. Now I have JPEGs I can use in iPhoto, while my original, uncompressed scans are safely archived. If you don't have Photoshop Elements, you can perform this automation chore using Yellow Mug Software's EasyBatchPhoto ($14; **www.yellowmug.com**).

## Photos, meet iPhoto

Once you've scanned and saved your photos, you're ready to import them into iPhoto.

**Divide before conquering** To take advantage of iPhoto's filing features, you may want to have a separate iPhoto roll for each set of related photos. In the Finder, move related photos into their own folder and give each folder a descriptive name, such as Christmas 1972. Drag each folder into the iPhoto window; the program will give each roll the same name as its corresponding folder. Delete the folders after you've imported their shots.

**Turn back the clock** To make iPhoto library chronologically accurate, change the date of each roll to reflect when its shots were taken, not when you imported them. Click the roll's name (if you can't see it, choose Rolls from the View menu) and type the desired date in the Date box near the lower left corner of the iPhoto window. Press return, and iPhoto sorts the roll into the proper position.

**Beware of black-&-white** If you're thinking of creating an iPhoto book from your newly scanned images, avoid using black-&-white photos. According to Apple, such photos print poorly because of the process used to produce iPhoto books. You can, however, order prints from black-and-white shots.

**Time for retouching** You can use iPhoto's Retouch tool to fix scratches and specks, and its Enhance button to fix colour and exposure problems. For serious retouching, use Photoshop Elements or Photoshop. To learn more about digital retouching, check out Katrin Eismann's Photoshop Restoration and Retouching, second edition (New Riders, ISBN: 073571350, £38.99). **MW**


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# The power of preferences

Delve into preferences to customize your Mac. **By Ted Landau**

Safari crashes on launch. Mail quits when you try to send a message. What to do? Most savvy Mac users will delete the application's preferences file, which stores changes made to the program's default settings. This creates a new (and hopefully problem-free) copy of the file, with default settings restored, the next time the application is launched. But you can do far more with these files. Editing OS X preferences files (also known as property list or .plist files) unlocks hidden features you can't access any other way.

Preferences files are plain-text files, so you can view or edit them in any text editor. But because they're written in XML format, it's easier to use a utility designed to interpret and format XML – just as using Adobe GoLive to edit HTML files is easier than using TextEdit to do so. Apple's Property List Editor does the trick (see "Cool tools" on page 163 for details). Once you've installed it, it'll be in the Applications folder inside the Developer folder at the root level of your drive.

## Sync bookmarks

The first time you launch Safari it imports bookmarks from Microsoft Internet Explorer. If you still use Explorer and continue to add bookmarks, at some point you might want to import your updated list. At first glance, you won't see a way to do this, but appearances are misleading. All you need to do is convince Safari you're launching it for the first time, and it'll import your latest Explorer bookmarks. The preferences file holds the key.

You can trash the com.apple.Safari.plist file, and Safari will import bookmarks on its next launch. But this also eliminates any other preferences changes you've made via Safari's Preferences command. A more elegant solution is to delete or modify just the right item in the preferences file:

1. Quit Safari if it's open.
2. Locate com.apple.Safari.plist by selecting Go To Folder from the Finder's Go menu and entering ~/Library/Preferences. This will take you to the Preferences folder in your Home directory's Library folder. Double-click on the file to open it in Property List Editor. (If it doesn't open in Property List Editor, drag the .plist file icon to the Property List Editor icon in the Finder.)
3. In the Property List column, click the disclosure triangle next to the word Root.
4. Scroll through the items that appear, and find the IEFavoritesWereImported property. (There's a related one for Netscape called NetscapeAndMozillaFavoritesWereImported, but we're concerned only with Explorer right now.)
5. Either select the IEFavoritesWere Imported property and click on the Delete button, or select the pop-up menu in the Value column of the IEFavoritesWereImported item and change Yes to No.
6. Save your changes and close the document.

The next time you launch Safari, it will import Explorer's current bookmarks and add the IEFavoritesWereImported property (if you deleted it), with its value set to Yes. If you've previously imported bookmarks from Explorer and haven't deleted them, the newly imported URLs will merge with the existing list.

**NOTE:** Under some circumstances, a bug makes IEFavoritesWereImported invisible in Property List Editor. If that happens, never fear – open the preferences file in a text editor, such as TextEdit. Look for these lines:

```
<key>IEFavoritesWereImported</key>
<true/>
```

## Geek favourites

Do you get worked up about disassembled PowerBooks? Do you go nuts for the details of a 1,100-node dual-2GHz Apple G5 Terascale Cluster? Share your love with others in this Apple-dedicated section of the venerable Slashdot Web site (http://apple.slashdot.org). **Scholle Sawyer Mcfarland**

# Cool tools

The easy way to edit a preferences file is to use Apple's Property List Editor. If you purchased a Mac in the last year or so, you probably already have it. Select Go To Folder from the Finder's Go menu and enter /Applications/Installers. It's part of the Mac OS X Developer Tools suite – called Xcode Tools in Panther. (If you bought OS X separately, look for your Developer Tools CD.) Otherwise, download the tools from the Apple Developer Connection site (**http://developer.apple.com/tools/download/**).

Change them to this:
<key>IEFavoritesWereImported</key>
<false/>

## Make the Finder anew

Maybe you're a Unix geek and spend most of your time in Terminal, so you'd like it to replace OS X's Finder completely, launching whenever the Finder would (at login, for instance). Or perhaps you want to do the same thing with a Finder alternative, such as Cocoatech's Path Finder utility ($34; **www.cocoatech.com**). A trip to Property List Editor will grant your wish.

1. Select Go To Folder from the Finder's Go menu and enter ~/Library/Preferences. This will take you to the Preferences folder in your Home directory's Library folder. Find com.apple.loginwindow.plist and open it in Property List Editor.
2. Click on the triangle next to the word Root.
3. Then, with Root selected, click on the New Child button.
4. A new New Item property will appear. Change its name to Finder.
5. Double-click in the Value column to make the field active. Then enter the absolute path for the application you want to launch. For example, if you wanted Terminal to launch by default, you would type /Applications/Utilities/Terminal.app.
6. Save your changes and close the document.

To test your change, log out and log back in. When you do so, Terminal should launch. You can still launch the real Finder by clicking on its icon in the Dock. To undo your change, delete the Finder property from the preferences file.

**TIP:** How do I know about this Finder property if it isn't present in the default preferences file? Apple revealed its existence on the Apple developer Web site (**http://developer.apple.com**).

## Tweak the hard disk's Sleep

Your preferences are generally your preferences. They're stored in your Home directory. If another user logs in, the preferences in his or her Home directory become active. But a few settings, such as those made via the Energy Saver preferences pane, aren't stored in a Home directory and, as a result, remain the same regardless of who logs in. That's handy if you're a system administrator and want to make a global change.

In Panther, you'll find the Energy Saver preferences in the com.apple.PowerManagement.plist file. Select Go To Folder from the Finder's Go menu and enter /Library/Preferences/SystemConfiguration. If you're using Jaguar, enter /var/db/SystemConfiguration. You'll find essentially the same file, but with .xml rather than .plist as the extension.

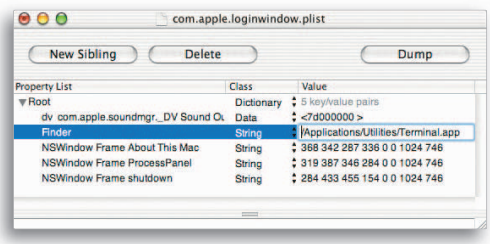
From the Energy Saver pane, you can access most of the properties listed here, with one exception: the length of time until your hard drive goes to sleep. You can't set a specific time with a slider, as you can with your display. However, you can work around this limitation:

1. Double-click on the System Preferences icon in the Dock and choose Energy Saver. Select the Put The Hard Disk(s) To Sleep When Possible option. Quit System Preferences.
2. Open the com.apple.PowerManagement.plist file in Property List Editor and click on the disclosure triangles to open Root and then AC Power. (If you're using a laptop, you'll see a matching set of properties for Battery Power.)
3. Locate Disk Sleep Timer. Its value (in minutes) should be set to 10. Double-click to edit the value; change it to any value you like, up to 180.
4. Save your change.

Oops. Did you just get a "Couldn't save document" error message? If so, the root user owns the file, and you don't have permission to change it. Get Brian R. Hill's Pseudo utility ($15; **http://personalpages.tds.net/~brian_hill/pseudo.html**), which lets an administrative user open an application as the root. Before launching Property List Editor, drag its icon to the Pseudo icon. You'll be asked for your administrative password. After you give it, Property List Editor will open as before, but you'll be able to save your change.

## Don't stop now

We've just scratched the surface of what you can do with preferences files. Go on your own exploratory adventure: open a selection of .plist files and discover the surprises within, or scan Web pages for tips. Either way, you'll unlock one of OS X's hidden powers. **MW**




***See ya, Finder***

*Too geeky to use the plain old Finder? Make Terminal launch at login by tweaking the right preferences file. Use Property List Editor to add the highlighted line to your com.apple .loginwindow.plist file.*

• Services • iTunes hints • Terminal tricks • Hidden Pong game

# Q&A/tips

Handy tips and readers' questions answered. **By Christopher Breen**

## Terms of services

**Q How do I get the items in the Services menu to work? For example, I want to grab a screenshot, but in every application I've tried, the Grab command's options are greyed out.**
Sean O'Brien

A As you've discovered, the services listed under the Finder menu's Services command only work in Cocoa applications – applications such as TextEdit and Safari written in OS X's Cocoa environment – and in those rare Carbon applications that were specifically written to support services. This leaves applications such as AppleWorks or Microsoft Word – as well as any Classic applications – out in the cold.

The Grab service is even more limited. Services are incapable of creating documents, which means the Grab service can't act like the similarly named Grab application (or even the ⌘-shift-3 keyboard shortcut) to take a screen shot and save it as a separate document. Instead, the Grab service can only add a capture to a document currently open in a supported Cocoa application

For example, if you've an RTF document open and active in TextEdit, the Grab service can capture a screen and place the resulting capture into the RTF document.

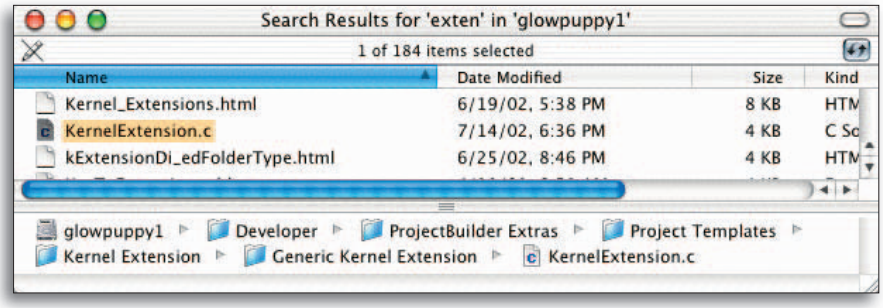
## Inflexible file

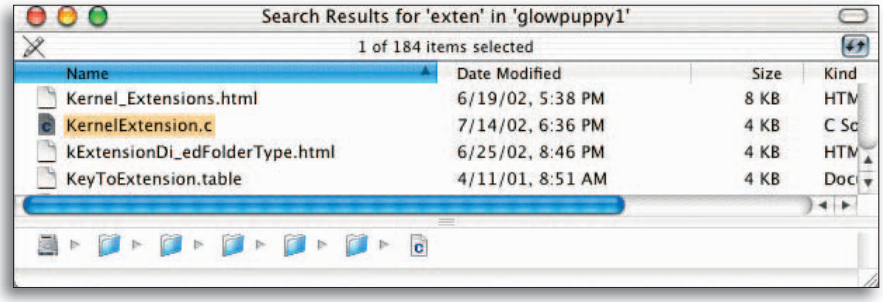
**Q There's a StuffIt file on my OS X Desktop that I'm unable to delete. Its icon is a file with a rip through the middle. When I attempt to trash the file I get a warning saying, "Item is being used by another task right now." Is there a way to get rid of it?**
Daniel Fishbein

A If you intend to trash only a single file, you can do that from Terminal (found in the Utilities folder). In the Terminal window type rm -f and then a space, drag the problem file onto the Terminal window to enter its path, and then press return. Your Mac will automatically delete the file without requesting confirmation.

To trash a folder (or, in Unix lingo, a directory),

*continues page 166*




## Display a file's real path

**Q Is there a way to see exactly where a file is in OS X's Find command search results? I want to be able to see the whole folder stack – but it only seems to display blank folder icons, which seems a bit useless.**
Victor Laycock

A When you use the Find command in OS X 10.2's Finder and then select an item from the results, the item's path may not be clearly visible (above"). To see the full path, you can drag up the bar that separates the search results from the path until you have designated a large enough display space. An easier method is to double-click on the divider bar, which forces the results to display in the smallest possible space. Double-click again, and you'll see a hierarchical path display. In OS X 10.3, Apple has fixed this problem, and the item's path will display correctly – though you can still drag up the divider bar to create the hierarchical path display.

## Print pages to PDF

**TIP** One of OS X's oft-overlooked features is its ability to turn any on-screen element into a PDF document, through the Print dialog box. Select File: Print from any application, and click on the Save As PDF button to create the file. This manoeuvre is perfect for sending a FileMaker Pro report to a colleague, saving online Web-store receipts, or creating a document that you can send to people on multiple platforms with the knowledge that they'll all be able to open, view, and print it.

This feature is even great for browsing Web sites – when you find a tidbit of knowledge you'd like to retain, just save it as a PDF file on your hard drive, and it will be instantly available when you need it.

# Redirecting an application's output

**TIP** When you're in OS X's command line, you may find the Unix redirection feature useful. Redirection is nothing more than taking the output of a program and sending it to somewhere other than its default location. For instance, if you'd like to save a full directory listing (created with ls -al) into a text file, you have two choices.

The typical Mac solution is to select the on-screen output, copy it, switch to a word processor, paste the contents, and save the file. The Unix redirection solution is much simpler. Just type ls -al > dirlist.txt, where dirlist.txt is any file name you want to use. The > symbol redirects the output of ls from its usual destination (the screen) to the specified file. This will create a new file or overwrite an existing file with the same name. If you have an existing file to which you'd like to add more data, replace the > with >>.

In addition to directory-list files, you can use redirection to create a list of all the MP3s in a certain directory (find ~/Music/ -iname "*.mp3" -print > mytunes.txt) or a running log of your machine's uptime and CPU load (uptime >> myuptime.txt), or to capture the output of any other Unix command.

***Hide and seek***
*A simple Terminal command gives your Dock the ability to show clearly which applications are hidden – the semitransparent icons for Safari, Terminal, iChat, and so on indicate those applications' hidden status.*

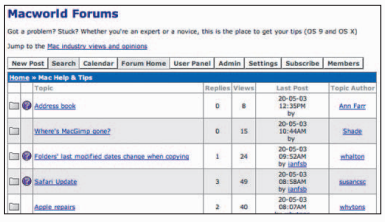
## GET QUICK ANSWERS HERE

Macworld contributing editor Christopher Breen answer readers' questions and selects reader-submitted tips for this column.

**Tips:** Send your tips (include your address and phone number, and mark Q&A in the subject line of the email) to **qanda@macworld.co.uk**. We pay £25 for each tip published here. We regret that we cannot make personal replies.

**Questions:** If you have a question, the fastest way to an answer is via Macworld's forums: go to **www.macworld.co.uk/forums**. The Mac Help & Tips Forum should be your first port of call. You need to register to use the forums, but it's free.

The forums are where Macworld editors and a host of Mac know-it-alls make it our business to put your Mac back in the pink. Before you post your cry for help, search the forum for similar queries. It's likely that if you're having problems, then someone else has already encountered and maybe even solved them.


Macworld Forums
Got a problem? Stuck? Whether you're an expert or a novice, this is the place to get your tips (OS 9 and OS X)
Jump to the Mac industry views and opinions
New Post | Search | Calendar | Forum Home | User Panel | Admin | Settings | Subscribe | Members
Home » Mac Help & Tips
Topic | Replies | Views | Last Post | Topic Author
Address book | 0 | 8 | 20-05-03 12:35PM by | Ann Farr
Where's MacGimp gone? | 0 | 15 | 20-05-03 10:44AM by | Shade
Folders' last modified dates change when copying | 1 | 24 | 20-05-03 09:52AM by jerbb | whalton
Safari Update | 3 | 49 | 20-05-03 08:58AM by jerbb | sugarcpc
Apple repairs | 2 | 40 | 20-05-03 08:07AM | whytons

type rm -R and then a space. Again, drag the problem folder into Terminal to enter its path, and then press return. But be very careful with rm -R because that -R means recursive and it indicates that the directory and all of its contents will be immediately deleted – not just placed in the Trash, but vapourized without warning.

Should you drag the wrong folder into Terminal and press return, it's gone. Worse yet, if you type rm -R *, all the contents of the selected directory (which is most likely your user folder) will be expunged.

## Make hidden apps behave

**Q I often find that when I've hidden an application, I forget that it has open windows – so if I accidentally click on its icon in the Dock, my screen suddenly fills with documents. Is there a way to show that a program is hidden without making it just seem like it has no active windows?**
Monique Dyson

**A** The easiest way to hide an application's windows is to press ⌘-H. But when you do this, the hidden application's Dock icon doesn't change – which may lead you to accidentally activate the hidden windows by clicking on the application's icon. Everyone falls for this occasionally.

With one simple Terminal command, you can command the Dock to differentiate between hidden and nonhidden apps (see "Hide and seek"). Just open a new Terminal window, type the following, and then press enter: defaults write com.apple.Dock showhidden -bool yes.

Although you've told the Dock to give your hidden applications a unique look, you won't see the effect until you restart the Dock. Launch Process Viewer in 10.2 or Activity Monitor in 10.3 (both in Applications: Utilities), find and click on the Dock entry, and then select Process: Quit to restart the Dock.

From now on, any application you hide will have a semitransparent icon. To get things back to normal, just re-open Terminal and repeat the above command with no at the end – then restart the Dock.

## Take Ink's font for a spin

**TIP** Are you addicted to fonts? Always looking to add another freebie to your collection? In OS X, Apple includes a font called Apple Casual for use with the Ink handwriting-recognition system. But even if you don't have an input pad, you can benefit from the Apple Casual font.

In the Finder, go to System: Library: Components: Ink.component: Contents: SharedSupport. Control-click on InkServer and select Show Package Contents; then go to Contents: Resources. The first item in the list will be AppleCasual.dfont. Open your user folder in a new Finder window, go to Library: Fonts, and copy the AppleCasual.dfont folder into your Fonts folder. The next time you start up applications, Apple Casual will be available for use.

## Quick software updates searches

**TIP** Most people check for the latest and greatest Apple software in OS X 10.2 by clicking first on the Software Update preference pane and then on the Check Now button to see what's out there. Here's a simple time-saver for the next time you want to find new and updated apps – hold down the option key while clicking on the Software Update panel, and the Check Now process will begin.

Panther users, you have two even simpler methods of checking for software updates. You can either use the Software Update menu option under the Apple menu, or you can click the Software Update button that you see when you select About This Mac from the Apple menu.

## Desktop pictures boon

**TIP** When you want to get a new collection of desktop images, you may think that you have to select Choose Folder from the Collection pop-up menu in the Desktop preference pane, and then navigate to the folder of your choice. But it's much easier to drag a folder from the Finder into the preview area near the bottom of the Desktop preference pane.

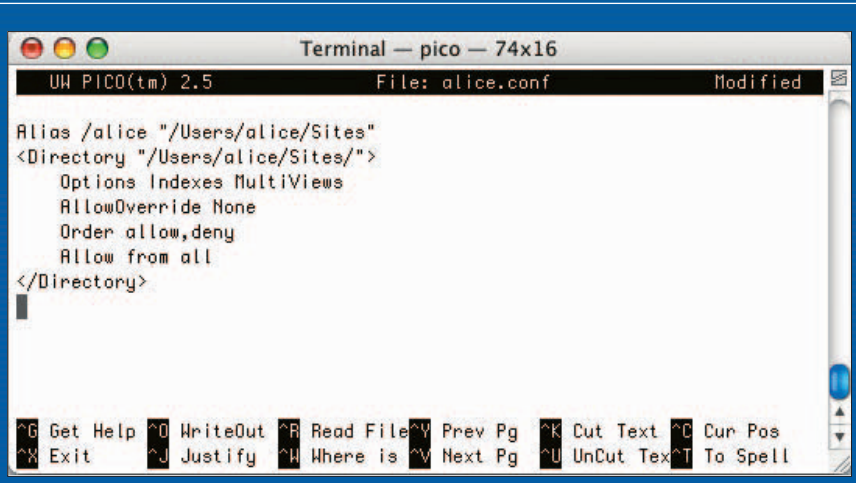
When you do that, the Collection pop-up menu will change to reflect the folder's name, and the preview area will display the images in that folder. (You can also drag an individual picture icon from within a folder to change the available collection and set the desktop picture at the same time.)

# Tip of the month: banish the tilde from site names

TIP With OS X's built-in Personal Web Sharing (found in the Sharing preference pane), every user on your Mac can have a personal Web site that others can access at a URL such as *http://your.ip.number/~user_name*. If you don't like having the tilde in the URL, however, you can easily remove it with Terminal and an admin password.

Open a Terminal window, and then type cd /etc/httpd/users to switch to the directory that Apache (the built-in Web server) uses to manage the user sites. If you're unsure of your users' short names, type ls to see a list of the available configuration files. Say you want to modify the settings for a user named Alice: type sudo pico alice.conf and enter your admin password when prompted to do so. Once the file is open, type the following above the first line (the one that begins with <Directory): Alias /alice "/Users/alice/Sites".

This Alias command acts just like an alias file in the Finder – it tells Apache that someone looking for a page at the /alice URL should be sent to Alice's Sites folder instead (above).




Once you've added the line, press control-X to exit, and then press Y when pico asks if you'd like to save the modified buffer – this will write your changes to the file.

Return to the Sharing preference pane, and turn the Personal Web Sharing feature off and then back on. This restarts Apache, which will then read the modified configuration.

From now on, you can skip the tilde and just type *http://your.ip.address/alice* to get to Alice's Web site. Repeat this process for any other user URL you'd like to modify.

## The oldest game in the newest OS

TIP Have a few minutes to spare for a game but not enough time to fire-up Unreal Tournament 2003 or The Sims? Try a quick game of Pong, *the* original video game. Just open a new Terminal window and type emacs; this is one of the more powerful Unix text editors. When the editor opens, press the escape key and then the X key, type pong, and press return.

You'll find a rudimentary Pong game on your screen. There's no computer opponent, so you'll have to use the left and right arrows to control the paddle on the left, and the up and down arrows to control the one on the right. When you're done being amazed at how far video games have come, just press Ctrl-X followed by Ctrl-C to return to the Terminal prompt – and the present day.

## Enhance column view

TIP If you'd like to see more data in Finder windows, open a window in Column view and type ⌘-J, or select View: Show View Options. At the top of the window, select the Windows option, and pick an 11- or 10-point size instead of the default 12-point. Unlike List and Icon views, Column view reduces the size of icons when you choose a smaller font. A simple one-point reduction in font size lets you see many more items at once, with almost no loss in readability.

## Multiple-line iChat messages

TIP If you ever want to send a multiline message to someone in iChat AV, just hold down the option key before you press return. You can now type multiple unique lines, pressing option and return simultaneously each time. The message won't be sent until you press just the return key.

***Play time***
*By default, iTunes shows cover art for your selected song (left). Click on the Selected Song title bar, though, and you'll get the much more relevant Now Playing artwork window.*

## View album art in iTunes

**Q I know iTunes displays cover art for albums and so on, but I want the picture to change when the song does. Any suggestions?**
Thomas Wolford

A For some reason, the default iTunes setting for displaying album covers is to show the artwork for the selected song, not the currently playing song. But you can eliminate this frustration. If you just click on the Selected Song title bar at the top of the cover-artwork box, it will change to read Now Playing. Now, iTunes will display the artwork associated with the current song for good – unless you click on the Now Playing title bar to change it (see "Play time").

## Stop Safari autocompleting

*TIP Safari tries to help by autocompleting URLs as you type them, basing its choices on your prior viewing habits. While this is useful most of the time, it's frustrating when you want to load a site's home page and Safari takes you to the subpage you last viewed. If you'd like to limit these autocompletions, start by choosing History: Clear History, and then quitting Safari. In your user folder, go to Library: Safari and locate the history.plist file. Select the file, choose File: Get Info, and then click on the Locked option. Now close the window.*

*When you relaunch Safari, autocompletion will still work as expected on bookmarks, and it will also work for URLs you visit in the current session. But the next time you quit and restart Safari, the autocompletion data will vanish – it can't be written to the locked .plist file. To return to normal autocompletion, deselect the Locked option in the history.plist file's Get Info dialog box.*

*continues page 168*

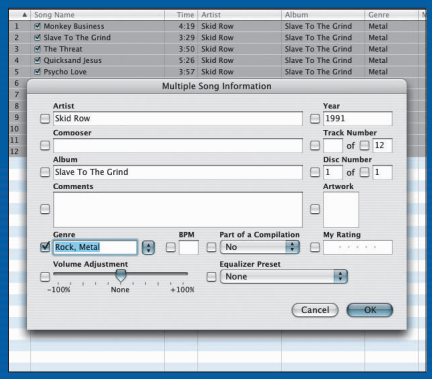
# iTunes: assigning genres; quick transport controls

**Q iTunes 4 lets me place a song into any genre for easy sorting and searching. But can I assign multiple genres to a single song?**
Rebecca Armstrong

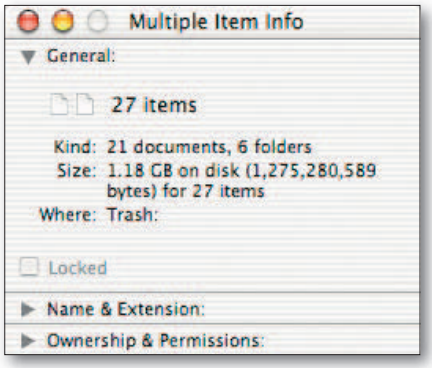
A You certainly can. Highlight a song in iTunes' library, and then select File: Get Info. In the dialog box that appears, click on the Info tab and type your genres, separated by commas (Rock, Pop, for example), in the Genre box, and then click on OK.

A future search or Smart Playlist for a particular genre will now show all songs with that genre in the Genre box. (Note that this will not work when using iTunes to browse by genre.)

**TIP Want to use the keyboard to fast-forward or rewind a song in iTunes? With iTunes as the active application, press and hold down both the ⌘ key and the option key; then press and hold the left- or right-arrow keys to rewind or fast-forward, respectively. This little trick saves you time and mouse movements.**




***Rubbish bag***
*In OS X, you can reveal the number and size of items in the Trash by opening it, selecting all, and getting information on the files.*



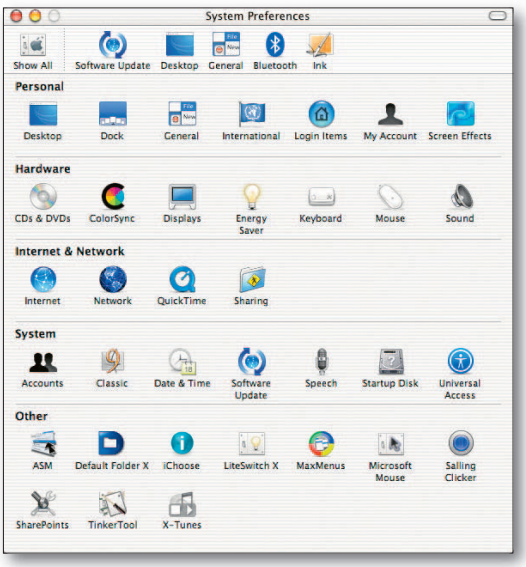

## How big is the Trash?

**Q Back in Mac OS 9, I could see how many files there were in the Trash when I emptied it. There doesn't seem to be a way to get this in OS X – or am I just being dense?**
Phillip Meek

A No, you aren't being dense – this information is useful when you want to perform a quick safety check. If your Trash contains 38.6GB of data, you probably want to verify that you didn't accidentally drag your iTunes Library into the Trash.

An easy way to get this information in OS X is to open the Trash by clicking on its Dock icon, type ⌘-A to select everything in it, and then type ⌘-I to open the Get Info window. The Get Info window will reveal the number, type, and size of the items in your Trash (see "Rubbish bag"). If the file count and size match what you expect, then go ahead and empty the Trash. If they don't, maybe you should dig for some buried treasure.

***Choose your own prefs***
*You can have access to the Bluetooth and Ink icons in the toolbar even though they aren't listed in the Hardware section, as they would be if the devices were attached.*




## Share Mail's junk rules

**TIP** Apple's Mail application has a great junk-mail filter. To get the most out of it, though, you'll have to spend a few months training it to distinguish your good email from your junk email.

If you have multiple machines, or multiple users on the same Mac, you don't have to let all that work go to waste. In your user folder, open the Library: Mail folder and copy LSMMAP to the same location in the other users' folders (or onto another machine entirely). Now when you run Mail as the other user, you'll have the benefit of all those months of training.

## Who's there?

**Q I want to see who's accessing my computer from the network. Not only because I'm nosey, but because I want to be sure that there aren't any snoopers looking at my files. Is there a quick way to see who's connected to me?**
Lisa Lakin

A If you use the Personal File Sharing feature in the Sharing preference pane, you may wonder how you can tell who's accessing your machine. The Network Utility in the Applications: Utilities folder will give you detailed information on everything that's happening on your network, but its output can be hard to read unless you're well versed in the language of networking. To quickly see who's out there, type this command in Terminal: netstat -na | grep 548.

The command's output shows you who's connected to your machine. The first output line displays an established connection between the host machine (IP address 192.168.1.150) and a guest machine (IP address 192.168.1.225). The last line shows a second connection from a machine with an IP address of 192.168.1.55.

If you see any IP numbers in your output that you don't recognize, it's possible that unauthorized users are using your shared folders, and you may wish to investigate further with your network's administrator or your ISP – and consider disabling Personal File Sharing until you figure out the source of the unknown connections.

## Display all your Preference panels

**TIP** In System Preferences, certain preference panels, such as Bluetooth and Ink, display only when the applicable hardware is available. To access these panels at any time, just drag them into the System Preferences toolbar (see "Choose your own prefs").

Once they're on the toolbar, you click on their respective icons to load the panels, even if you don't have the proper hardware attached. **MW**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# Macworld Buyers' Guide

Apple divides its Macs into consumer and professional, and desktop and portable. But just because you fancy an iMac, don't rule out a portable – you might be surprised how much a PowerBook or iBook suits you. And some users may require a "pro" machine even if they class themselves as a "consumer". Decide what it is you want to do, and follow our advice here.

## Desktop or portable

If you're often on the move, consider an iBook or PowerBook. You can easily hook each up to a larger monitor and separate mouse on a desk when you're back at base. They're easy to hide away, and with AirPort wireless networking, you can access the Internet up to 150-feet away from your telephone connection.

Apple's portables come loaded with every high-tech port needed, unlike most Windows laptops. The iBook is ultra-small, lightweight and, importantly for students, relatively impact-resistant – and even its 12-inch screen is still sizeable. The pro PowerBook G4 is super-thin and lightweight, and boasts screens from 12 to 17 inches. Its set of ports, including S-Video and Gigabit Ethernet, is impressive – as is its DVD-R SuperDrive.

## Performance

Gauging speed by **processor** megahertz ratings is the easy – but incorrect – way to judge performance. You must take into account the amount of memory, the size and speed of the hard disk, graphics card and video memory, and size of cache.

**The PowerPC G5 processor is a super-fast, next-generation 64-bit chip from IBM. If blistering performance at the bleeding edge is what you need, a Power Mac G5 is a must.**

**The PowerPC G4 processor from Motorola drives the Power Mac G4, PowerBook, iMac and eMac. It is specially optimized to speed-up selected programs via AltiVec technology.**

Apple now uses two PowerPC processors: the **G4** and **G5**. Both include AltiVec technology that makes specially optimized software run even faster. The full potential of the G5 will be realized when software – and especially the operating system – is optimized for its 64-bit architecture. Currently, nearly all software runs at the G4's 32-bit level. That said, the G5 is still faster – but not enough to disregard the speedy G4, which has plenty of life left in it yet.

Word-processing, spreadsheets, email and Web browsing don't require the very fastest processors, but digital photography, video, and graphics do.

The more memory (**RAM**) you have on your Mac, the faster your applications will run, and you'll be able to keep more programs open at the same time. We recommend you upgrade the memory to *at least* 512MB of RAM.

Fitting extra RAM to a Mac is easy, but get your reseller to fit it if you're nervous. Depending on which model you buy, an extra 256MB can cost as little as £35 online (try **www.crucial.com/uk**), and adding 512MB more will set you back about £100. RAM for portables often costs more.

**Cache** is a memory subsystem that stores frequently used RAM data for even faster processing access. It's necessary because most computers suffer from performance bottlenecks that slow data down as it travels around the system. The Power Mac G5 features super-fast interconnects, and so requires less cache – the data speeds around fast enough without it.

Most consumers won't get near filling their **hard disk** with their AppleWorks files, digital snaps and Web downloads. Video-editors and iTunes users, however, will require a larger disk. Get as many gigabytes as possible. You can't upgrade the hard drives in the iBook, PowerBook, iMac or eMac, but you can add inexpensive external FireWire disks.

A **video card** connects a Mac to its display. Serious gamers and creative professionals should aim for one of the ATI Radeon or NVidia GeForce4 cards found in Power Macs, with 64MB of video RAM onboard. You can't later upgrade the video card in any of the other systems – but this shouldn't matter for many users.

## Features

Apple differentiates its Mac models by type of optical drive: CD or DVD. All Macs come with at least a combination **DVD-ROM/CD-RW** drive that can read and writes CDs, and can play DVDs and DVD movies. The **DVD-R SuperDrive** does all that, and writes DVDs (DVD-R) of iMovies and digital snaps that play in domestic DVD players. The desktop Macs' SuperDrive writes to DVD at 4x-speed; the PowerBook's at 1x-speed.

All Macs come with top-of-the range connectivity features. Networking is at least 10/100BaseT **Ethernet**, with 1,000BaseT for Power Macs and the 15-inch and 17-inch PowerBooks.

All Macs offer at least two USB **ports** for peripherals, and at least one FireWire 400 (400Mbps) for digital video and peripherals. All now boast 480Mbps USB 2.0, except the eMac's older 12Mbps USB 1.1. USB 2.0 is compatible with USB 1.1 devices. The eMac's FireWire port makes the lack of USB 2.0 relatively meaningless. The 15-inch and 17-inch PowerBooks and Power Mac G5 include a FireWire 800 port (800Mbps).

All Macs ship with an internal 56Kbps modem. If you're frequently connected to the the Internet for long periods of time (especially in peak weekday times), you'll probably save call charges by upgrading to a faster **ADSL** broadband connection. You'll need to add an ADSL modem or router, and pay an ISP from around £23 a month for the faster access – but you pay no call charges no matter how long a Mac is connected, and you can use the phone at the same time. Unfortunately, not all areas are ADSL ready – check your phone number at: **www.bt.com/broadband**.

Apple's **AirPort** wireless-networking technology – based on either the IEEE 802.11b or 802.11g industry standards – lets you browse the Internet from anywhere in your home, up to 150 feet away from your phone line or Ethernet connection. AirPort uses radio waves, so it even works through walls. The latest Macs use **AirPort Extreme** (802.11g), boasting 54Mbps speeds, compared to the older AirPort's 11Mbps.

All Apple's new Macs come with the top-quality **iLife** suite of integrated digital-lifestyle software. **iMovie** is a simple but powerful digital-video editor

that works with FireWire. **iTunes** is music 'jukebox' software that can manage MP3 and AAC files, and burn audio CDs. **iPhoto** is a superb program that helps import, edit, organize and share digital photos. DVD-R SuperDrive models come with **iDVD**, which makes creating DVDs a doddle. Some Macs also ship with **AppleWorks** – a suite of easy-to-use business programs. The consumer Macs also ship with reference CDs and games.

Apple charges £69 per year for its online-based iTools, now called **.Mac.** You get an email address, 100MB of free Web space, simple Web-site templates, backup and virus protection.

Apple and its partners have made great efforts to ensure that Macs are largely **compatible with Windows PCs**. USB and FireWire help on connectivity. Emulation programs such as Virtual PC can run Windows software straight from a Mac.

Key applications, such as Microsoft Office, Adobe Photoshop and Macromedia Dreamweaver are all fully compatible with their Windows counterparts. You can swap Word, Excel and PowerPoint documents between the platforms.

## Education pricing

Apple offers special pricing for educational users. Institutions such as schools and colleges get the biggest discounts. Teachers and students get about a 9 per cent discount via the online Apple Store – click on Education. **MW**

*continues page 170*

## UPDATED 22/10/03

The main selling points of the **iBook** are its compact, lightweight, impact-resistant case and low price. Its processor has recently been upgraded to a G4, which makes it a very capable OS X machine.

The 256MB RAM is fine for OS X and a couple of programs, but performance will be boosted greatly by adding as much as you can. Via the Apple Store, the maximum 640MB of RAM will cost £120; via an online reseller, as little as £90.

The iBook ships with iMovie, iTunes and iPhoto, as well as the World Book encyclopedia and a couple of games. Word-processing, database, spreadsheet, presentations and graphics tools are provided by AppleWorks.

S-Video and composite video output require a £15 Apple Video Adaptor. Video mirroring to a projector or monitor is via the Apple VGA Display Adaptor.

**Pros:** Small enough to slip into a backpack, tough enough for schoolkids, the iBook is a more than capable and affordable consumer portable.

**Cons:** Requires more RAM. Ask for a larger hard-drive in the 12.1-inch model if you're an iTunes or iMovie user. The 14.1-inch model has a larger viewing area, but no more pixels and is half a kilo heavier.

All iBooks:
**Video card:** 32MB ATI Mobility Radeon 9200. **Resolution:** 1,024-x-768 pixels
**Memory:** 256MB (Max: 640MB)
**Cache:** 256K L2
**USB 2.0:** 2 **FireWire 400:** 1
**Ethernet:** 10/100BaseT **AirPort:** 54Mbps

■ Entry-level 12.1-inch TFT:
**Processor:** 800MHz G4
**Hard disk:** 30GB
**Optical:** DVD-ROM/CD-RW
**Weight:** 2.2kg **Price:** £849
**Star Rating:** ★★★★/8.4

■ Entry-level 14.1-inch TFT:
**Processor:** 933MHz G4
**Hard disk:** 40GB
**Optical:** DVD-ROM/CD-RW
**Weight:** 2.2kg **Price:** £999
**Star Rating:** ★★★★/8.4

■ High-end 14.1-inch TFT:
**Processor:** 1GHz G4
**Hard disk:** 60GB
**Optical:** DVD-ROM/CD-RW
**Weight:** 2.7kg **Price:** £1,199
**Star Rating:** ★★★★/7.8

## UPDATED 22/10/03

For the consumer/education market, the **eMac** offers a fast G4 processor, large CRT screen (with surprisingly small footprint), multiple optical-drive options, and superb pricing. It measures up well against the iMac. Its built-in 17-inch CRT display offers more screen-space at larger resolutions than the 15-inch LCD iMac. It costs a lot less than the top-end 17-inch iMac. Many will be swayed, however, by the iMac's LCD screen (think long and hard about screen size) and flexibility.

It's fast enough for consumer and educational tasks (Web, email, word-processing, accounts, digital photography, iTunes, etc), and capable of running even pro applications such as Adobe Photoshop.

Add more RAM; at least 512MB is recommended. Via the Apple Store, this will cost up to £120; online, it can be found for £60. A tilt-&-swivel stand for the eMac costs £49.

The eMac ships with the Apple programs (iMovie, iTunes, iPhoto; and iDVD on the SuperDrive model), as well as the World Book encyclopedia, and Deimos Rising game. Word-processing, spreadsheet, database, presentations and graphics tools are provided by AppleWorks.

**Pros:** Top features at attractive prices. Impressive screen resolution.

**Cons:** Requires more RAM. USB 1.1 rather than much faster USB 2.0, but FireWire makes up for this. Not as flexible as iMac. Limited internal expandability (extra RAM and AirPort Card only), although external alternatives are plentiful.

All eMacs:
**Processor:** 1GHz G4
**Screen:** 17-inch CRT (1,280-x-960 pixels)
**Video card:** 32MB ATI Radeon 7500
**Cache:** 256K L2
**USB 1.1:** 3 **FireWire 400:** 2 **PCI:** 0
**Ethernet:** 10/100BaseT **AirPort:** 54Mbps

■ Entry-level:
**Memory:** 128MB (Max: 1GB)
**Hard disk:** 40GB
**Optical:** DVD-ROM/CD-RW
**Price:** £649
**Star Rating:** ★★★★/8.8

■ High-end:
**Memory:** 256MB (Max: 1GB)
**Hard disk:** 80GB
**Optical:** DVD-R SuperDrive (4x)
**Price:** £849
**Star Rating:** ★★★★★/9.2

## UPDATED 08/09/03

The **iMac** boasts a "floating" flat-panel LCD screen that is held by a flexible chrome-pipe neck, allowing you to move it up and down and from side to side to gain a more comfortable viewing experience. LCD screens aren't just kinder to the neck, they're also easier on the eye than CRTs.

While the 15-inch LCD doesn't offer as large a viewing area as the eMac's, the widescreen 17- and 20-inch LCDs are particularly handy for multi-paletted pro applications. Inevitably, the LCD screens make the iMac more expensive than the CRT-based eMac – but offer compelling reasons for the extra outlay. The dome-like base also saves valuable desk space.

The iMacs ship with the great Apple programs (iMovie, iTunes, iPhoto; and iDVD on the SuperDrive model), encyclopedia, games, and AppleWorks.

**Pros:** Nothing beats the iMac on looks, and the adjustable LCD screen is a real improvement on the static CRT – although the eMac's maximum resolution is greater than the 15-inch G4 iMac's.

**Cons:** Like the eMac, the G4 iMac has limited internal expandability (extra RAM and AirPort Card only), although inexpensive external alternatives are plentiful.

All G4 iMacs: **Ethernet:** 10/100BaseT
**USB 2.0:** 3 **FireWire 400:** 2 **PCI:** 0
**Hard disk:** 80GB **AirPort:** 54Mbps
**RAM:** 256MB (Max: 1GB) **Cache:** 256K L2
**Apple Pro Speakers:** Included.

■ 15-inch:
**Processor:** 1GHz G4
**Optical:** DVD-ROM/CD-RW
**Screen:** 15-inch LCD (1,024-x-768 pixels)
**Video card:** 32MB NVidia GeForce4 MX
**Price:** £999
**Star Rating:** ★★★★/8.4

■ Widescreen 17-inch:
**Processor:** 1.25GHz G4
**Optical:** DVD-R SuperDrive (4x)
**Screen:** 17-inch LCD (1,440-x-900 pixels)
**Video card:** 64MB GeForce FX 5200 Ultra
**Price:** £1,449
**Star Rating:** ★★★★/8.6

■ Widescreen 20-inch:
**Processor:** 1.25GHz G4
**Optical:** DVD-R SuperDrive (4x)
**Screen:** 20-inch LCD (1,680-x-1,050 pixels)
**Video card:** 64MB GeForce FX 5200 Ultra
**Price:** £1,749
**Star Rating:** ★★★★/8.7

## UPDATED 08/10/03

Despite the arrival of the Power Mac G5, Apple is still selling the minitower **Power Mac G4**. Prices are reasonable, but you don't get the ultimate in performance.

Power users should seriously consider saving for the Power Mac G5, which is far more advanced and potentially a lot more powerful.

The stop-gap Power Mac G4 range offers older specs than those available previously. There's no FireWire 800, USB 2.0, or AirPort Extreme/Bluetooth built in.

But it does offer something that the G5 doesn't: the ability to boot in Mac OS 9. This may interest musicians and designers who are still waiting for OS X-compatible plug-ins. This is the only reason to consider the Power Mac G4 these days.

**Pros:** The entry-level model is an inexpensive pro-tower that offers OS 9 bootability – still important to some users. The dual-processor machines are well-priced for OS X-fearing power users.

**Cons:** Uses older specifications than previous G4s; superseded by G5.

All G4 Power Macs:
**USB 1.1:** 2 **PCI:** 4
**FireWire 400:** 2
**System Bus:** 167MHz
**Ethernet:** 10/100/1000BaseT
**AirPort:** 11Mbps

■ Entry-level:
**Processors:** 1 x 1.25GHz G4
**Memory:** 256MB DDR (Max: 2GB)
**Disk:** 80GB **Cache:** 1MB L3
**Optical:** DVD-ROM/CD-RW
**Video card:** 64MB ATI Radeon 9000 Pro
**Price:** £999
**Star Rating:** ★★★★/7.4

■ Mid-range:
**Processors:** 2 x 1.25GHz G4
**Memory:** 256MB DDR (Max: 2GB)
**Disk:** 80GB **Cache:** 2MB L3 per chip
**Optical:** DVD-ROM/CD-RW
**Video card:** 64MB ATI Radeon 9000 Pro
**Price:** £1,239
**Star Rating:** ★★★★/7.5

■ High-end:
**Processors:** 2 x 1.25GHz G4
**Memory:** 512MB DDR (Max: 2GB)
**Disk:** 80GB **Cache:** 2MB L3 per chip
**Optical:** DVD-R SuperDrive (4x)
**Video card:** 64MB ATI Radeon 9000 Pro
**Price:** £1,489
**Star Rating:** ★★★★/7.5

## POWERBOOKS UPDATED 16/09/03

Its lightweight case and speedy processor make the **PowerBook G4** a genuine alternative to the desktop Power Mac. There are two compact 12.1-inch screen models, two 15.2-inch widescreen, and one large 17-inch widescreen. All now feature the lightweight anodized-aluminium case.

G4 processor speeds start at 1GHz – easily fast enough for pro applications, and the video cards boast up to 64MB of video RAM. Each size has a slot-loading DVD-R SuperDrive model – although this runs slower than that in desktop models.

If you fancy the iBook for its compact size and light weight, but demand more power, the **12-inch** PowerBook is a great choice if you're frequently on the move. Digital video-out is via a mini-DVI port. Connect to an external Apple LCD display with a £75 DVI-to-ADC adaptor. It lacks fastest Gigabit Ethernet – although this won't bother many.

Mobile computers are all about compromise (size against performance and features), and the middle model will appeal to those who can take a little extra weight for the extra screen space. Now that the **15-inch** model is in the aluminium case, with AirPort Extreme and FireWire 800, it is the pick of the range.

The **17-inch** PowerBook boasts the largest laptop screen on earth, and will appeal to video or music pros, who regularly need to take their computers on the road. Size isn't really an issue when travelling, but frequent laptop luggers will be put off by its weight – although it's reasonable for such a large-screen laptop.

All models support dual-screen display using external monitors.
**Pros:** Lightweight, slim and stylish, there's a PowerBook G4 model for everyone: from compact to giant; USB 2.0 on all models; 1.25GHz 15-inch and 17-inch include backlit keyboard.
**Cons:** 12-inch has no FireWire 800; 17-inch shows its size by weight.

Both 12.1-inch PowerBooks:
**Processor:** 1GHz G4 **AirPort:** 54Mbps
**Memory:** 256MB (Max: 1.25GB)
**Cache:** 512K L2 **Hard disk:** 40GB
**Video card:** 32MB NVidia GeForceFX 5200
**Resolution:** 1,024-x-768 pixels
**USB 2:** 2 **FireWire 400:** 1 **Weight:** 2.1kg
**Ethernet:** 10/100BaseT **S-Video:** 1

■ DVD-ROM/CD-RW **Price:** £1,299
**Star Rating:** ★★★★/8.4

■ DVD-R SuperDrive (1x) **Price:** £1,449
**Star Rating:** ★★★★/8.6

Both 15.2-inch PowerBooks:
**Cache:** 512K L2 **Weight:** 2.49kg
**Resolution:** 1,280-x-854 **AirPort:** 54Mbps
**USB 2.0:** 2 **FireWire 400:** 1
**PC Card:** 1 **FireWire 800:** 1
**Ethernet:** 10/100/1000BaseT **S-Video:** 1
**Video card:** 64MB ATI Radeon 9600

■ DVD-ROM/CD-RW 15.2-inch:
**Processor:** 1GHz G4 **Hard disk:** 60GB
**Memory:** 256MB (Max: 2GB)
**Price:** £1,599 **Star Rating:** ★★★★★/9.0

■ DVD-R SuperDrive (1x) 15.2-inch:
**Processor:** 1.25GHz G4 **Hard disk:** 80GB
**Memory:** 512GB (Max: 2GB)
**Price:** £1,999
**Star Rating:** ★★★★★/9.0

■ DVD-R SuperDrive 17-inch:
**Processor:** 1.33GHz G4
**AirPort:** 54Mbps
**Memory:** 512MB (Max: 1GB) **PC Card:** 1
**Cache:** 512K L2 **Hard disk:** 80GB
**USB 2:** 2 **FireWire 400:** 1 **FireWire 800:** 1
**Ethernet:** 10/100/1000BaseT **S-Video:** 1
**Video card:** 64MB ATI Radeon 9600
**Resolution:** 1,440-x-900 pixels
**Optical:** DVD-R SuperDrive (1x)
**Weight:** 3.08kg
**Price:** £2,399
**Star Rating:** ★★★★★/9.0

## UPDATED 18/11/03

The **Power Mac G5** is the spearhead of Apple's attack on the PC workstation market – packed with next-generation technologies, and running IBM's extremely powerful 64-bit G5 processor.

Its phenomenal power isn't just down to the processor. Performance bottlenecks are eliminated by an industry-best frontside bus running at up to 1GHz, and HyperTransport interconnects.

Hard drives are Serial ATA, supporting 1.5Gbps throughput per channel.

All this speed generates a lot of heat, and Apple has created a smart cooling system with up to nine fans and four thermal zones. As fans can slow down depending on the operation in progress, sound levels are reduced, making the Power Mac G5 much quieter than the G4. The addition of USB 2.0 ports means that the Power Mac G5 can support many peripherals previously pegged back at slower USB 1.1 speeds.

The top Power Macs feature two G5 chips – making it the perfect machine for multiprocessor-optimized applications such as Adobe Photoshop and Final Cut.

The ability to add up to 8GB of super-fast DDR RAM is another plus for OS X users – particularly for creative professionals.

As a pro system, it ships with Gigabit Ethernet for faster networking – although you'll have to upgrade your LAN's switches to get all the benefits.

The case is well designed for easy access and quick upgradability. It's even easier to fit RAM and drives than in the Power Mac G4 – you don't need any tools; everything slides and clicks into place with ease.

The Power Mac ships with the Apple iLife programs (iMovie, iTunes, iPhoto; and iDVD).
**Pros:** Super-fast; next-generation technologies; up to 8GB RAM; DVD-R SuperDrive; digital audio; quiet.
**Cons:** No good if you want to boot in Mac OS 9, but Classic works fine.

All G5 Power Macs: **USB 2.0:** 2 **FireWire 400:** 2 **FireWire 800:** 1 **AGP 8X Pro:** 1
**Ethernet:** 10/100/1000BaseT **AirPort:** 54Mbps

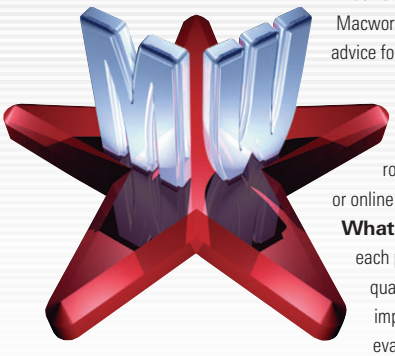
■ Entry-level:
**Processors:** 1 x 1.6GHz G5
**Frontside Bus:** 800MHz
**Memory:** 256MB DDR (Max: 4GB)
**Hard disk:** 80GB Serial ATA
**Optical:** DVD-R SuperDrive (4x)
**PCI:** 3 x 33MHz
**Video card:** 64MB GeForce FX 5200 Ultra
**Price:** £1,399
**Star Rating:** ★★★★/8.5

■ Mid-range:
**Processors:** 2 x 1.8GHz G5
**Frontside Bus:** 900MHz
**Memory:** 512MB DDR (Max: 8GB)
**Hard disk:** 160GB Serial ATA
**Optical:** DVD-R SuperDrive (4x)
**PCI-X:** 1 x 133MHz; 2 x 100MHz
**Video card:** 64MB GeForce FX 5200 Ultra
**Price:** £1,899
**Star Rating:** ★★★★★/9.0

■ High-end:
**Processors:** 2 x 2GHz G5
**Frontside Bus:** 1GHz
**Memory:** 512MB DDR (Max: 8GB)
**Hard disk:** 160GB Serial ATA
**Optical:** DVD-R SuperDrive (4x)
**PCI-X:** 1 x 133MHz; 2 x 100MHz
**Video card:** 64MB ATI Radeon 9600 Pro
**Price:** £2,299
**Star Rating:** ★★★★★/9.0

# Macworld Star Ratings

## Recommendations you can trust



*Macworld*'s Star Ratings section lets you compare Macintosh products by providing summaries of Macworld's authoritative hardware product reviews from the past year. It includes detailed buying advice for each product category and a fuller description of our Editors' Choice winners. Alongside the list of Macworld Star Ratings are handy tips and further product buying advice.

Star Ratings for Mac systems are published in the Mac Systems Guide – see earlier. Subscribers can go to **www.macworld.co.uk** to explore our comparative feature round-ups and reviews for both software and hardware. Listings tell you which back-issue, or online archive, to search.

**What the scores mean** The number of stars indicates the product's level of quality; each product also gets a numeric score that provides a more exact assessment of the product's quality within that level. We evaluate seven factors to derive the star rating: feature set; design implementation; performance; reliability; ease of use; innovation; and value. We take these evaluations, weight their importance for each product class, and calculate the final score.

| REAL PRODUCTS | REAL RATINGS | | |
|---|---|---|---|
| ★★★★★ | 9.0 | to 10.0 | Outstanding |
| ★★★★ | 7.0 | to 8.9 | Very good |
| ★★★ | 5.0 | to 6.9 | Good |
| ★★ | 3.0 | to 4.9 | Flawed |
| ★ | 0.0 | to 2.9 | Unacceptable |

Macs are used in most recording studios because a Mac's PowerPC processor is more efficient than Intel chips running at the same speed, so it can handle extra channels and signal processing, or both simultaneously. While **digital-audio** plays digitized recordings, making demands of your disk-drive and system bus, **MIDI** (Musical Instrument Digital Interface) behaves more like a word processor – with file sizes to match.

If you're still linking Macs with 10BaseT **Ethernet**, move to the faster 100BaseT, available on all current Macs. The latest Power Macs and PowerBooks come with 1000BaseT (Gigabit) Ethernet, which is even faster than 100BaseT.

Apple's **AirPort Extreme** is a fast wireless-networking technology. Add a £59 (2.0) or £79 (Extreme) card, and you can network and browse the Web cablelessly up to 150ft away from your £149 or £189 Base Station. AirPort works with all current Macs, and is now a viable alternative to wire-based networking. If you can, upgrade your Internet connection to **broadband**, via ADSL, cable or satellite. You'll need either an ADSL router (recommended) or a special modem. Add extra peripherals Macs with a **USB** or **FireWire hub**.

It's a snap to load digital photos into a Mac. With **iPhoto**, digital photography moves to an even higher level. **Resolution** of digital cameras is measured in horizontal and vertical pixels: 1,024-x-768, etc. High-resolution images show a greater level of detail – and can be more readily enlarged – than images with fewer pixels. Manufacturers also list resolution in terms of the total number of pixels. For example, 1,280 horizontal by 960 vertical pixels create a total of 1.2 million pixels (1,280-x-960 = 1.2 megapixels.

Any camera with an aggregate resolution of over 1 million pixels is referred to as a **megapixel** camera. If you plan to use images on the Web, you can get by

## AUDIO / MUSIC

| | | |
|---|---|---|
| ★★★★/7.0 | **AV320**, Archos, *01264 366 022*, £560 (inc. VAT). Audio and video in your hand. Outputs to TV, but not too easy to use. | *Nov 2003* |
| ★★★★/8.5 | **iPod 10GB**, Apple, £249 (inc. VAT). Apple's MP3 super-slim player holds 2,500 tunes with solid-state controls. | *Nov 2003* |
| ★★★★★/9.0 | **iPod 20GB**, Apple, £299 (inc. VAT). Super-slim player holds 5,000 tunes, has solid-state controls, and dock. | *Nov 2003* |
| ★★★★★/9.2 | **iPod 40GB**, Apple, £399 (inc. VAT). Super-slim player holds 10,000 tunes, has solid-state controls, and dock. | *Nov 2003* |
| ★★★★/8.8 | **JBL Creature**, Harman @ Computers Unlimited, *020 8200 8282*, £99. Speakers look great, but the sound quality could be better. | *March 2003* |
| ★★★★★/9.2 | **Mbox for OS X**, Digidesign, *01753 653 322*, £379. Records, edits and mixes multiple tracks, but needs free USB port on Mac. | *March 2003* |
| ★★★★/7.7 | **Podio Pro**, MacAlly, *01392 426 473*, £58.69 (inc. VAT). White iPod headphones with noise-cancelling feature, and flight adaptor. | *Oct 2003* |
| ★★★★★/9.0 | **PowerWave**, Griffin @ AM Micro, *01392 426 473*, £99 (inc. VAT). Excellent-quality audio and includes software. | *March 2003* |
| ★★★★/8.7 | **SliMP3**, Slim Devices @ Multitask Computing, *01322 380 023*, £209 (inc VAT). Stylish wireless functionality, MP3 streamer. | *March 2003* |
| ★★★/6.6 | **Voice Recorder**, Belkin, *00800 2235 5460*, £39 (inc. VAT). Nifty microphone for dock-enabled iPods. | *Expo 2003* |

## CONNECTIVITY / NETWORKING

*Servers, routers, software, remote access, SCSI cards, emulators, hubs, adaptors…*

| | | |
|---|---|---|
| ★★★★/8.8 | **AMX-64**, ADSL Nation, *01865 761 114*, £99 (inc VAT). Affordable 4-port ADSL router that's easy to set-up. | *Expo 2002* |
| ★★★★/8.5 | **Cayman 3341**, Netopia, *020 8358 5858*, £99 (inc VAT). Affordable 2-port ADSL router that's easy to set-up. | *Sept 2003* |
| ★★★★/8.8 | **DG814**, Netgear, *020 7216 0014*, £95 (inc VAT). 4-port ADSL router that's easy to set-up. | *Expo 2002* |
| ★★★★/7.6 | **extendAIR Direct**, Dr Bott; Channel Dynamics, *0870 607 0540*, £139 (inc VAT). Antenna to extend AirPort's range. | *Jan 2004* |
| ★★★★/8.5 | **GSW-8**, Corega, *08705 168 626*, £115 (inc VAT). 8-port Gigabit Ethernet switch. | *Sept 2003* |
| ★★★★/7.5 | **SpeedTouch 510**, *01295 222 170*, £163 (inc VAT). Stylish and secure ADSL router, let down by hard-to-follow set up. | *Expo 2002* |
| ★★★★/8.8 | **SpeedTouch 330**, Alcatel, *01295 222 170*, £79 (inc VAT). Stylish, compact ADSL modem that's Mac OS X-friendly. | *Expo 2002* |
| ★★★★/8.7 | **StingRay**, Hermstedt, *020 8200 8282*, from £2,895 (ex VAT). Cheap to run, secure and easy-to-use file-transfer solution. | *Feb 2003* |

## DIGITAL CAMERAS / CAMCORDERS / VIDEO-CON

*Consumer and professional; still and video; Apple's iPhoto. All prices include VAT.*

**Digital-still cameras**

| | | |
|---|---|---|
| ★★★★/8.1 | **007 JB1**, Digital Dream, *01304 248 200*, £69. Zippo-sized 0.3-megapixel gadget-camera – basic quality, but tons of fun. | *Expo 2003* |
| ★★★/6.7 | **Camedia C-350**, Olympus, *0800 072 0070*, £249. Easy to use and traditionally styled 3.2-megapixel model. | *Aug 2003* |
| ★★★/6.9 | **C-740 Ultra Zoom**, Olympus, *020 7253 2772*, £299. 3.2-megapixel unit offering excellent images, but poor documentation. | *Dec 2003* |
| ★★★★/7.0 | **Caplio G4/Wide**, Ricoh, *01782 753 300*, £199. A 3.2-megapixel model offering fast shutter response and a great lens. | *Jan 2004* |
| ★★★/6.8 | **Cyber-shot DSC-P8**, Sony, *08705 111 999*, £350. Compact 3.2-megapixel camera with movie mode but no manual controls. | *Aug 2003* |
| ★★★/6.8 | **Cyber-shot DSC-P72**, Sony, *08705 111 999*, £300. Same as DSC-P8 but lacking controls over sharpness and saturation. | *Aug 2003* |
| ★★★/6.7 | **Cyber-shot DSC-V1**, Sony, *08705 111 999*, £546. Well-designed 5-megapixel model; delivers noisy shots, though. | *Dec 2003* |
| ★★★/6.5 | **Dimage Xt**, Minolta, *01908 200 400*, £249. Slimline 3.2-megapixel unit with easy-to-use movie mode. | *Dec 2003* |
| ★★★★/8.7 | **EOS 10D**, Canon, *08705 143 723*, Body-only, £1,499. Great digital SLR with well-balanced mix of features, comfort and quality. | *Oct 2003* |
| ★★★★/8.6 | **EOS 300D**, Canon, *08705 143 723*, £999. True SLR with removable lenses and low price, but no rear-mounted control-wheel. | *Expo 2003* |
| ★★★★/8.6 | **FinePix A303** Fujifilm, *020 7586 1477*, £449. SuperCCD offers an effective resolution of six megapixels. | *Sept 2003* |
| ★★★★/7.8 | **FinePix F410 Zoom** Fujifilm, *020 7586 1477*, £299. Decent 3-megapixel entry-level with 3x zoom. | *Sept 2003* |
| ★★★★/8.5 | **FinePix F601 Zoom** Fujifilm, *020 7586 1477*, £499. SuperCCD offers an effective resolution of six megapixels; funky look. | *Sept 2003* |
| ★★★★/7.7 | **IXUS II**, Canon, *08705 143 723*, £369. Nicely designed 3.2-megapixel model with movie mode but no red-eye. | *Aug 2003* |
| ★★★/6.6 | **Lumix DMC-FZ1**, Panasonic, *08705 357 357*, £329. Stunningly fast 2-megapixel unit that unfortunately lacks full manual controls. | *Dec 2003* |
| ★★★★/7.5 | **Mju 300**, Olympus, *020 7253 2772*, £299. Responsive 3.2mp model with reliable picure quality, but a lack of manual controls. | *Jan 2004* |
| ★★★★/8.5 | **PowerShot A80**, Canon, *08705 143 723*, £349. Responsive 4-megapixel camera that boasts spanking image-quality. | *Expo 2003* |
| ★★★★/8.0 | **PowerShot G5**, Canon, *08705 143 723*, £628. An excellent 5-megapixel camera with add-on lens and flash support. | *Dec 2003* |
| ★★★★/8.0 | **PowerShot S50**, Canon, *08705 143 723*, £549. A 5-megapixel model with full manual controls and a movie mode. | *Aug 2003* |
| ★★★★/8.6 | **Photosmart 735**, HP, *08705 47 47 47*, £199. A cheap-as-chips, no-nonsense 3.2-megapixel camera with 3x optical zoom. | *Nov 2003* |
| ★★★★/8.2 | **Revio KD-420Z**, Konica Minolta, *020 8751 6121*, £249. Blindingly fast and rugged 4-megapixel model with great image quality. | *Jan 2004* |

**Consumer digital camcorders**

| | | |
|---|---|---|
| ★★★★/8.0 | **DM-MV5i,** Canon, *0800 616 8883*, £850. This camcorder has good specs, but is £50-£100 more than equally specced models. | *March 2003* |
| ★★★★/8.5 | **DM-MX2i,** Canon, *0800 616 8883*, £1,149. With optical stabilization, this camcorder delivers crisp pictures – at a price. | *March 2003* |
| ★★★★/7.5 | **DS60 DV Camcorder**, Panasonic, *08705 357 357,* £449. Budget model offering decent quality for the price. | *Aug 2003* |
| ★★★★★/9.0 | **DVX100**, Panasonic Broadcast, *08700 100 464,* £3,195. Film-style aesthetics without the Hollywood budget. | *Nov 2003* |
| ★★★★/8.0 | **GR-D70**, JVC, *0870 300 5000,* £600. Low-price palmcorder that offers DV-in and -out, and excellent image-quality. | *Aug 2003* |
| ★★★★/8.5 | **GR-DV700**, JVC, *0870 300 5000,* £750. Midrange, easy-to-use 1.33-megapixel camcorder. Excellent for the price. | *Aug 2003* |
| ★★★/6.5 | **GR-PD1**, JVC, *0870 330 5000*, £2,500. High Definition camcorder with 16:9 mode and MPEG-2 recording. Little Mac support. | *Expo 2003* |
| ★★★★/8.6 | **iSight**, Apple, £119. Idiot-proof, portable webcam that ties in well with iChat AV. | *Sept 2003* |
| ★★★★/8.7 | **MVX150i,** Canon, *08705 143 723*, £899. This camcorder offers great image quality, 16x zoom and impressive features. | *Sept 2003* |
| ★★★★/8.3 | **NV-GS5**, Panasonic, *0870 357 357,* £850. With a decent resolution and variable-speed zoom, the GS5 only lacks a stills mode. | *March 2003* |
| ★★★★/8.6 | **NV-GX7**, Panasonic, *0870 357 357,* £750. Excellent image quality, a stills mode and night shooting. | *March 2003* |
| ★★★★/8.7 | **DCR-PC8**, Sony, *020 7365 2947*, £549. Great little camcorder that's a joy to use; requires FireWire cable. | *Sept 2003* |
| ★★★★/8.3 | **VP-D130**, Samsung, *0800 521 652,* £700. This cheap camcorder is for those who want to keep it simple. | *March 2003* |

**FireWire webcams**

| | | |
|---|---|---|
| ★★★★/7.7 | **Fire-i,** Unibrain; Channel Dynamics, *0870 607 0540*, £92. Great in low light, compact, but mediocre quality on colours and pictres. | *Jan 2004* |
| ★★★★/7.7 | **iBot Standard,** Orange Micro; Channel Dynamics, *0870 607 0540*, £88. Great picture quality, but bulky and poor software. | *Jan 2004* |
| ★★★★/8.6 | **iSight,** Apple, £119. Excellent picture quality; built-in mic; great design, but poor in low-light conditions. No additional software. | *Jan 2004* |
| ★★★★/8.3 | **Pyro 1394 WebCam,** ADS; Datavision UK, *01525 406 886*, £89. Great picture quality and software, but a little bulky. | *Jan 2004* |

## DISPLAY

*Monitors, projectors and video cards.*

**17-inch flat-panel LCD displays**

| | | |
|---|---|---|
| ★★★★/8.8 | **17-inch Studio Display**. Apple, *0800 039 1010*, £549 (inc VAT). Apple's 1,280-x-1,024-pixel screen is big as well as beautiful. | *July 2002* |
| ★★★★/7.7 | **C783,** Microtek, *01372 844 880*, £553. Good-value if-dull flat-panel offering built-in speakers. | *July 2002* |
| ★★★★★/8.8 | **Gallery 1740,** Formac, *020 8533 4040*, from £528 (inc VAT). Great-looking 17.4-inch 1,280-x-1,024-pixel ADC monitor. | *July 2002* |
| ★★★★/7.7 | **SyncMaster 171S**, Samsung, *0800 521 652*, £489. Compact, lightweight LCD screen that's nicely styled. | *July 2002* |

**18-inch flat-panel LCD displays**

| | | |
|---|---|---|
| ★★★★/7.7 | **FlexScan L685-EX,** Eizo, *01483 719 500*, £1,089. Compact 18.1-inch 1,280-x-1,024-pixel LCD monitor. | *July 2002* |
| ★★★★/8.6 | **MultiSync LCD 1880SX,** NEC, *0801 201 160*, £959. Compact, attractive 18.1-inch 1,280-x-1,024-pixel LCD monitor. | *July 2002* |
| ★★★★/8.6 | **photon18blue**, LaCie, *020 7872 8000*, £899. 18-inch 1,280-x-1,024-pixel LCD screen boasting great image quality. | *July 2002* |

**19-22-inch flat-panel LCD displays**

| | | |
|---|---|---|
| ★★★★★/9.2 | **Cinema Display HD**, Apple, *0800 039 1010*, £1,699 (inc VAT). **Editors' Choice: High-end flat-panel displays** Excellent high-definition 1,920-x-1,200-pixel screen that's suitable for use with high-end digital-video editing. | *March 2003* |
| ★★★★★/9.0 | **Cinema Display**, Apple, *0800 039 1010*, £1,009 (inc VAT). Apple's 20-inch screen has a 1,680-x-1,050 wide-screen resolution. | *March 2003* |
| ★★★★/8.5 | **FlexScan L767,** Eizo, *01483 719 500*, £734. Affordable 19-inch LCD that comes with a digital interface. | *June 2003* |
| ★★★★/8.3 | **FlexScan L985-EX,** Eizo, *01483 719 500*, £1,561. Monster 21-3-inch LCD that's pricey, but is of undeniable quality. | *June 2003* |
| ★★★★/8.5 | **MultiSync LCD1920NX,** NEC, *0801 201 160*, £750. A good-value 19-inch LCD that offers a digital interface. | *June 2003* |
| ★★★★/8.3 | **MultiSync LCD2080UX,** NEC, *0801 201 160*, £1,048. 20.1-inch LCD that's well-priced, and includes an auto-adjust feature. | *June 2003* |
| ★★★★/8.7 | **P922E,** CTX, *01923 810 800*, £545 (inc. VAT). Inexpensive 19-inch LCD with USB 2.0 hub. | *Oct 2003* |
| ★★★★/8.6 | **Photon20Vision**, LaCie, *020 7872 8000*, £1,404. Quality 20.1-inch flat panel with calibration option, desk clamp and hood. | *June 2003* |
| ★★★★/8.7 | **S962A LCD Monitor,** CTX, *01923 810 800*, £492 (inc VAT). Affordable 19-inch flat-panel display. | *Jan 2004* |

**21-inch+ CRT displays**

| | | |
|---|---|---|
| ★★★★★/9.0 | **Diamond Pro 2070SB,** Mitsubishi, *020 7202 6300*, £499. **Editors' Choice: 21-inch+ CRT displays** This monitor offers top features at a great price. It can display at 2,048-x-1,536-pixels at 85Hz. | *Jan 2003* |
| ★★★★/8.7 | **electron22blue III**, LaCie, *020 7872 8000*, £699. Aperture-grille offering great image quality, but the competition is catching up. | *Jan 2003* |
| ★★★★/7.0 | **FlexScan T966,** Eizo, *01483 719 500*, £659. 21-inch aperture-grille at a reasonable price. | *Jan 2003* |
| ★★★★/8.3 | **Multiscan E520,** Sony, *08705 111 999*, £769. This is a high-quality monitor, but you pay extra for the Sony brandname. | *Jan 2003* |
| ★★★★/7.0 | **Reference Calibrator V,** Barco@Typemaker, *0221 604 1234*, £3,250. Pricey, but colour-accurate display is losing edge on rivals. | *Jan 2003* |
| ★★★★/8.3 | **SM1200NF**, Samsung, *0800 521 652*, £489. The screen looks dated, but it's feature rich with a decent resolution.. | *Jan 2003* |
| ★★★★/7.7 | **VisionMaster Pro 513,** Iiyama, *01438 745 482*, £369. A great choice if you want cheap and cheerful. | *Jan 2003* |

**Projectors**

| | | |
|---|---|---|
| ★★★★/7.6 | **LiteShow**, InFocus, *0800 028 6470*, £349. AirPort connection to the LP120 projector. | *Dec 2003* |
| ★★★★★/9.1 | **LP120**, InFocus, *0800 028 6470*, £1,999. Tiny, fully featured 1,100 ANSI lumen projector – the best there is. | *Dec 2003* |

**Display/TV hardware**

| | | |
|---|---|---|
| ★★★★/8.5 | **Alchemy TV**, Miglia @ AM Micro, *01392 426 473*. TV tuner that can transfer VHS tapes to a Mac. | *Jan 2004* |
| ★★★★/8.0 | **CinemaLift**, LCDArms, *www.lcdarms.com*, £175. Well-designed flexible arm for raising a Cinema Display up to eye level. | *Jan 2004* |
| ★★★★/8.2 | **Eye TV**, El Gato @ CU, *020 8358 5858*. Easy-to-set-up method of watching television on your Mac. | *May 2003* |

## INPUT

*Mice, trackballs, digital tablets… All prices include VAT.*

| | | |
|---|---|---|
| ★★★★/8.7 | **Desktop Navigator**, Logitech, *01753 870 900*, £79. Affordable, attractive wireless keyboard. | *June 2003* |
| ★★★★/8.2 | **Graphire3 Studio XL**, Wacom, *Computers Unlimited, 020 8358 5858*, £179. A5 tablet with stylus and scroll-wheel mouse. | *Dec 2003* |
| ★★★★/7.3 | **Wireless Keyboard**, Apple, *0800 039 1010*, £59. Bluetooth keyboard complete with 128-bit encryption. | *Dec 2003* |
| ★★★★/8.8 | **Wireless Intellimouse Explorer 2.0**, Microsoft, *0870 207 7377*, £55. Five-button, side-scrolling optical mouse. | *Jan 2004* |

with a low-res camera. If you want to use the images in print at anything greater than postage-stamp size, at least a two-megapixel camera is a must. Look for optical resolution; ignore interpolated resolution.

Select a camera that offers the option of switching between high-res/fewer shots and lower-res/many shots. SmartMedia **storage** cards are cheaper but flimsier, and offer less storage than CompactFlash cards. Sony cameras use MemorySticks. Other formats include SecureDigital, Multimedia, and the tiny XD Picture card. Digital cameras tend to be **battery** hogs, so rechargeable batteries are a must. NiCad batteries are cheaper than NiMH batteries, but the latter last longer between charges.

Those who don't own a **digital-video camcorder** are missing out on one of the best reasons to own a Mac. All of Apple's Mac models, even the least-expensive iMac, have built-in FireWire ports and iMovie software, making the creation of professional-looking videos for business, home, and school projects very easy.

Most camcorders use MiniDV tapes, tiny cassettes that store 60 minutes of high-quality digital video in standard-play mode or 90 minutes in long-play mode. Sony's MicroMV digital-video format is not yet supported. Once you record video, you can upload it to a Mac via a **FireWire** cable and edit it using either Apple's **iMovie** or a higher-end program such as Apple's **Final Cut Pro/Express**. Add effects with **Adobe After Effects**.

The DV format – used by DV, MiniDV, and Digital 8 cassettes – stores video at more than twice the resolution of standard VHS or 8mm tapes, and it stores 25 per cent more information than S-VHS or Hi8 tapes. Colour fidelity and noise immunity are also markedly better on DV tapes than on analogue tapes, resulting in breathtaking video quality. And because the recorded video is digital, you can upload it to your Mac or copy it to another DV tape without any loss of quality.

Aim for a FireWire digital camcorder with both **DV-In** and **-Out**, as this means you can transfer your edited movie from your Mac back to MiniDV tape.

The first decision you'll need to make is whether to get a flat-panel display, based on liquid crystal display (**LCD**) technology, or a cathode-ray tube (**CRT**) monitor.

CRTs are cheaper and offer higher colour vibrancy and accuracy than LCDs. If low price is your biggest requirement, or if you're looking for a display for publishing or design work, go with a CRT.

An LCD display's advantage is unparalleled sharpness and ultra-thin profile. If space considerations, or a cutting-edge look, top your list of concerns, and you can afford it, today's flat-panel displays are worth a serious look. With a flicker-free screen and tiny footprint, an LCD is easy on the eyes in more than one sense.

Today's monitors offer one or more of the following connections: VGA, DVI, or ADC. A screen hooked-up to a digital DVI or ADC connector offers sharper, clearer images than those connected via an analogue VGA connector. Analogue LCDs can display "noise", a by-product of converting the video signal from digital to analogue and then back again. The ADC (Apple Display Connector) port combines a DVI signal with power and USB. The single cable leaves your desk relatively clutter free, but ADC is available only on cards shipping in Power Mac G4s and Cubes released after August 2000.

Except for the Apple displays, most monitors can plug directly into an analogue VGA connector, making them compatible with current and older desktops and laptops. Some models offer both analogue and digital inputs. These are the most compatible, as they can plug

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into DVI or standard VGA connectors and, with a third-party adaptor, into ADC ports. The Apple displays require the ADC port available on only recent G4 and G5 desktops.

When comparing the image size of displays, be sure to check the **viewable image size**, not the claimed size of the CRT or flat-panel. The **resolution** of a monitor is expressed in horizontal and vertical pixel dimensions, and range from 640-x-480 pixels to 1,600-x-1,200 pixels and beyond. The higher the resolution, the more you will be able to see on-screen. The more inches, the larger the pixels.

A CRT's **dot pitch** measures how close adjacent phosphor dots (or stripes on aperture-grille CRTs) are to each other. In general, the smaller the dot pitch, the sharper (and more expensive) the display will be.

On CRT monitors, a low **refresh rate** – how many times your Mac sends a fresh copy of the screen image to your display – implies flicker, a major cause of eyestrain. The higher the refresh rate, the better. LCDs don't suffer from flicker at all.

High-end monitors may also come with **calibration** software and devices for ensuring accurate colour for publishing and design applications.

Input devices come in many shapes and sizes. Go for an **optical mouse**, which are less prone to wear-&-tear than the old-style mice. Apple's mouse is good, but lacks extra buttons and a scroll wheel – fantastic for zipping through documents and Web pages.

**Graphics tablets** are now very advanced and often come with pressure-sensitive pens, which enable more control when using natural-media graphics software like Painter. The harder you press, the thicker the line. They take some getting used to, but many artists swear by them – not at their mice!

The range of printers available is huge: fast network printers, for business, to slower-but-cheap colour printers for home.

Decide what you need from your printer, look at your budget and, most importantly, look at the **output** of the printer. The only way to avoid disappointment is to have a dealer print out a page in front of you. Remember that the test prints shown in shops are often done on expensive glossy paper.

**Speed** is also an issue. At home, waiting 15 minutes for a colour page to print may be acceptable. In the office, however, time is money – meaning that faster printers are needed.

**Home/small office use:** A4 Inkjets are the cheapest printers to buy, and can output near-photographic quality prints – great with digital cameras. If you mainly run-out black-&-white prints of letters and so forth, consider a mono laser printer (which cost from around £250).

**Business use:** Fast, networkable mono lasers cost from £500. Decent colour lasers will set you back at least £1,000. Design studios should consider a colour proofer – available from HP and Epson.

**Multifunction devices:** Companies such as HP and Lexmark offer all-in-one devices that include a printer, scanner, copier and fax. These save desk space, but aren't the best alternative at each of their functions.

Remember to find out the price of **consumables**. An inkjet can get through a cartridge in just a few months. Macworld tests for how many high-colour pages you'll get out of a cartridge, so check our product round-ups.

| | | |
|---|---|---|
| ★★★/6.5 | **Wireless Mouse**, Apple, *0800 039 1010*, £59. Bluetooth mouse. Lacks a scroll-wheel. | *Dec 2003* |
| ★★★★/8.8 | **Wireless Optical Desktop Elite Executive Edition**, Microsoft, *0870 207 7377*, from £99. All-singing, all-dancing keyboard. | *Jan 2004* |
| ★★★★/8.9 | **Wireless Optical Mouse 2.0**, Microsoft, *0870 207 7377*, £39. Super-smooth scrolling; scrolls sideways; three-buttons. | *Jan 2004* |

## PDAs

*Personal digital assistants and related third-party hardware and software.*

| | | |
|---|---|---|
| ★★★★/8.0 | **Clie PEG-NX70V**, Sony, *020 7365 2947*, £527. PDA offering stereo sound, and Memory Stick and CompactFlash slots. | *May 2003* |
| ★★★★/7.5 | **Tungsten E**, Palm, *0118 927 8700*, £149. Affordable, no-frills PDA with SD-card slot | *Expo 2003* |
| ★★★★/8.7 | **Tungsten T3**, Palm, *0118 927 8700*, £329. Bluetooth-compatible PDA with big screen and multimedia capabilities. | *Expo 2003* |
| ★★★★/8.0 | **Zire**, Palm, *0118 927 8700*, £88. Inexpensive PDA with rechargeable batteries. | *May 2003* |

## PRINTING

*Inkjets, lasers, workgroup, thermal wax, dye sublimation, solid ink and software solutions.*

**All-in-one printer, scanner, copiers** *(All prices include VAT).*

| | | |
|---|---|---|
| ★★★★/8.9 | **PSC 1205**, Hewlett-Packard, *08705 474 747*, £99. Compact, affordable, relatively fast all-in-one offers good quality photos. | *Sept 2003* |
| ★★★★/8.9 | **PSC 2175**, Hewlett-Packard, *08705 474 747*, £169. Fast all-in-one with six-ink option for even better photo quality. | *Sept 2003* |
| ★★★/6.8 | **Stylus CX3200**, Epson, *0800 200 546*, £149. All-in-one printing, scanning and faxing. | *Jan 2003* |
| ★★★★/7.4 | **x1150**, Lexmark, *0870 444 0044*, £79. Affordable, good-looking but very slow all-in-one. | *Sept 2003* |
| ★★★★/8.2 | **x5150**, Lexmark, *0870 444 0044*, £129. Affordable, good-looking but slow all-in-one. | *Sept 2003* |

**Consumer/entry-level pro** *(All prices include VAT).*

| | | |
|---|---|---|
| ★★★★/8.0 | **450CBi**, Hewlett-Packard, *08705 474 747*, £249. Aimed at laptop owners, this printer is portable and versatile. | *Jan 2003* |
| ★★★★/8.3 | **DeskJet 5150**, Hewlett-Packard, *08705 474 747*, £89. A4 inkjet that excels at colour photos; optional six-colour cartridge. | *Nov 2003* |
| ★★★★/8.9 | **i450**, Canon, *08705 143 723*, £99. Low-price colour A4 inkjet that outputs great quality for the price. | *Sept 2003* |
| ★★★★/8.6 | **i470D**, Canon, *08705 143 723*, £179. A4 inkjet that outputs great quality, and includes memory-card reader. | *Sept 2003* |
| ★★★★/8.9 | **i6500**, Canon, *08705 143 723*, £339. Great A3+ photographic output, very fast and quiet. | *Sept 2003* |
| ★★★★/7.9 | **P706 Photo JetPrinter**, Lexmark, *0870 444 0044*, £69. Affordable but slow. | *Sept 2003* |
| ★★★★★/9.0 | **PhotoSmart 7350**, Hewlett-Packard, *08705 474 747*, £199. An A4 inkjet that uses PhotoRet IV technology to great effect. | *Oct 2002* |
| ★★★★/8.0 | **S750**, Canon, *08705 143 723*, £159. Colour A4 inkjet offering edge-to-edge printing and impressive photo results. | *Oct 2002* |
| ★★★★/8.7 | **S900**, Canon, *08705 143 723*, £329. Edge-to-edge colour A4 inkjet that's fast and outputs decent colour. | *Oct 2002* |
| ★★★★/8.7 | **S6300**, Canon, *08705 143 723*, £379. Colour A3+ inkjet offering easy-to-achieve colour accuracy and economic ink usage. | *Oct 2002* |
| ★★★★/8.3 | **Stylus C60**, Epson, *0800 200 546*, £79. This entry-level 1,400dpi model is slow – but offers stunning output for your money. | *Oct 2002* |
| ★★★★★/9.0 | **Stylus C42UX**, Epson, *0800 200 546*, £59. Slow, but offers spectacular colour quality for the price. | *Oct 2002* |
| ★★★★/7.7 | **Stylus C80**, Epson, *0800 200 546*, £149. Entry-level 2,800dpi model that uses pigment inks for better output on plain paper. | *Oct 2002* |
| ★★★★/8.3 | **Stylus Photo 890**, Epson, *0800 200 546*, £169. Quality edge-to-edge A4 colour inkjet that's also fast. | *Oct 2002* |
| ★★★★/8.7 | **Stylus Photo 895**, Epson, *0800 200 546*, £179. Same as the 890 but with extra features for digital photographers. | *Oct 2002* |
| ★★★★/8.9 | **Stylus Photo 830U**, Epson, *0800 200 546*, £99. A photo printer for £99 is a great deal – especially when output is outstanding. | *July 2003* |
| ★★★★/8.1 | **Stylus Photo 925**, Epson, *0800 200 546*, £249. Doesn't need a computer to print from memory cards. | *Jan 2003* |
| ★★★★/8.6 | **Stylus Photo 935**, Epson, *0800 200 546*, £229. Top-quality output, six-colour inks, standalone printing. | *Sept 2003* |
| ★★★★★/9.0 | **Stylus Photo 950**, Epson, *0800 200 546*, £379. The edge-to-edge A4 950 can print on CDs, and paper rolls. Classic only. | *Oct 2002* |
| ★★★★★/9.0 | **Stylus Photo 2100**, Epson, *0800 200 546*, £599. A3 2,880dpi seven-ink inkjet that offers flawless edge-to-edge colour output. | *Oct 2002* |
| ★★★★/7.6 | **Stylus Pro 7600**, Epson, *0800 200 546*, £2,814. Excellent image quality and print speed for a wide-bodied printer | *Feb 2003* |
| ★★★/6.0 | **Z65**, Lexmark, *0870 444 0044*, £129. Same unattractive build as the Z55 but with an extra paper-input tray. | *Oct 2002* |
| ★★★★/8.2 | **z705 Photo JetPrinter**, Lexmark, *0870 444 0044*, £59. Affordable but very slow. | *Sept 2003* |

**Professional** *(All prices exclude VAT)*

A3 colour lasers

| | | |
|---|---|---|
| ★★★★/7.1 | **AcuLaser C8600PS**, Epson, *0800 200 546*, £3,879. Slow yet high-quality graphics-oriented A3+ colour laser. | *May 2003* |
| ★★★★/8.8 | **Elite Color 16**, GCC, *020 8380 6870*, £1,399. Bargain-priced, duplexing high-quality colour laser printer. | *Expo 2003* |
| ★★★★/8.7 | **C752n**, Lexmark, *0870 444 0044*, £1,879. A4 colour laser that offers decent-quality prints at a fair speed. | *Expo 2003* |
| ★★★★/8.7 | **C9500**, Oki, *0800 917 6015*, £4,869. Super-fast A3 laser ideal for the most demanding office environment. | *May 2003* |
| ★★★★★/9.1 | **CL30**, Xanté, *0870 742 0802*, £4,249. Feature-laden graphics A3 laser printer that is both speedy and well-priced. | *May 2003* |
| ★★★★★/9.0 | **PlateMaker 4**, Xanté, *0870 742 0802*, £4,499. Complex, quality mono laser printer for producing computer-to-plate plates. | *July 2003* |
| ★★★★★/90 | **Phaser 6250n**, Xerox, *0870 241 3245*, £1,609. Fast, affordable colour laser printer that offers excellent quality | *Expo 2003* |
| ★★★★/8.4 | **Phaser 7700**, Xerox, *0870 241 3245*, £5,520. Speedy, well-priced graphics A3 laser. | *May 2003* |

A4 colour lasers

| | | |
|---|---|---|
| ★★★★/8.1 | **AcuLaser C1900PS**, Epson, *0800 200 546*, £1,029. Multi-pass model that does well on speed, quality and price. | *May 2003* |
| ★★★★/8.0 | **AcuLaser C4000PS**, Epson, *0800 200 546*, £1,749. Single-pass laser that offer great output, but at a high price. | *May 2003* |
| ★★★★/8.3 | **C750**, Lexmark, *08704 440 044*, £2,059. Ultra-speedy single-pass laser that's also economical on consumables. | *May 2003* |
| ★★★★/7.7 | **HL-4000CN**, Brother, *0845 606 0626*, £1,780. Competitively priced single-pass model. | *May 2003* |
| ★★★★/8.1 | **HP 2500**, HP, *08705 474 747*, £1,155. Affordable, if slow, multi-pass A4 that offers decent output. | *May 2003* |
| ★★★★/7.3 | **HP 4600**, HP, *08705 474 747*, £1,752. Reasonably priced single-pass A4 model. | *May 2003* |
| ★★★★/8.0 | **Magicolor 2350**, Minolta-QMS, *01784 442 255*, £849. High quality at a superb price, but rather slow. | *May 2003* |
| ★★★★/7.3 | **Magicolor 3100**, Minolta-QMS, *01784 442 255*, £1,795. A slightly overpriced single-pass laser printer that offers quality output. | *May 2003* |
| ★★★★/8.0 | **C5300n**, Oki, *0800 917 6015*, £1,069. Well-priced single-pass A4 laser that's both speedy and of high quality. | *May 2003* |
| ★★★★/8.0 | **C7500n**, Oki, *0800 917 6015*, £2,919. Speedy, feature-rich single-pass A4 laser. | *May 2003* |
| ★★★★/7.7 | **Phaser 6200n**, Xerox, *0870 241 3245*, £2,010. Speedy, if expensive, single-pass A4 printer. | *May 2003* |

| | | |
|---|---|---|
| ★★★★/7.7 | **Phaser 8200**, Xerox, *0870 241 3245*, £1,610. Solid-ink single-pass A4 laser offers good quality and is also well-priced. | *May 2003* |
| ★★★★/8.4 | **AW 1200**, Xanté, *0870 742 0802*, £799. Inexpensive 1,200dpi mono A3+ laser printer. | *Oct 2002* |

## SCANNING

*Consumer and professional scanners*

If you need to get printed images into your Mac, but you don't have a digital camera or want to put your old photos on the Web, you need a scanner. Before buying a scanner you must consider the final output you're aiming for. If your job is for a glossy magazine, then a high-resolution drum scanner is what you need.

It's more likely, though, that that kind of scanning would be done by a pre-press house or a bureau. Some **high-end** flatbed scanners are actually approaching drum-scanner quality. Some professional scanners require a SCSI interface, so new Macs will require that a SCSI card be added. However, manufacturers are now adding FireWire and USB 2.0 interfaces to their top scanners.

You can buy a dedicated **slide scanner** or attach an optional slide tray to your flatbed. Some scanners have neat internal trays for ease of use.

If your needs are less great, there are many fair-quality **low-end** scanners at unbelievably cheap prices. Again, claims for quality are often based on resolution. Look at the optical resolution rather than the interpolated resolution, as interpolation is just a process of digitally enlarging the scan. Make sure that the connection (USB, SCSI or FireWire) is right for your Mac. Scanners often come with bundled software to let you manipulate the images once you have scanned them.

**Consumer/entry-level** *(Prices include VAT. All models USB)*

| | | |
|---|---|---|
| ★★★★/8.2 | **CanoScan D2400UF**, Canon, *08705 143 723*, £219. 2,400dpi A4 scanner offering transparency adaptor. | *Nov 2002* |
| ★★★★/8.0/8.1 | **CanoScan LiDE 20 / 30**, Canon, *08705 143 723*, £59; £79. Ultra-thin entry-level 600dpi and 1,200dpi A4 scanners. | *Nov 2002* |
| ★★★★/8.6 | **IRISPen II Executive**, IRIS,@ Softline *01883 745 111*, £129. Cheap, accurate pen scanner that works with any application. | *May 2003* |
| ★★★★/8.1 | **Perfection 1260**, Epson, *0800 220 546*, £79. Basic 1,200dpi A4 scanner offering optional £45 transparency adaptor. | *Nov 2002* |
| ★★★★/8.0x | **Perfection 1660 Photo**, Epson, *0800 220 546*, £169. 1,600dpi A4 scanner offering a decent software bundle. | *Nov 2002* |
| ★★★★/8.6 | **Perfection 2400 Photo**, Epson, *0800 220 546*, £199. Capable 2,400dpi A4 scanner with built-in transparency adaptor. | *Nov 2002* |
| ★★★★★/9.0 | **ScanJet 3500c**, HP, *0870 547 4747*, £79. Great-value OS X-compatible 1,200dpi model. | *Nov 2002* |
| ★★★★/8.6 | **ScanJet 4670**, HP, *0870 547 4747*, £179. Innovative design; scans slides; easy storage, but cools looks mean a higher price. | *Jan 2004* |
| ★★★★/7.0 | **ScanJet 8200**, HP, *0870 547 4747*, £449. 4,800dpi resolution; transparency adaptor; USB 2.0. Overpriced. | *Nov 2003* |
| ★★★/6.8 | **ScanJet 8250**, HP, *0870 547 4747*, £749. 4,800dpi resolution; transparency adaptor; USB 2.0; document feeder. Expensive. | *Nov 2003* |

**Professional**

| | | |
|---|---|---|
| ★★★★/7.2 | **ArtixScan 1100**, Microtek, *01327 844 880*, £1,408. Overpriced SCSI-2, 1,000dpi, 42-bit A4 scanner. | *Expo 2002* |
| ★★★★★/9.0 | **ArtixScan 1800f**, Microtek, *01327 844 880*, £1,799. 1,800-x-3,600dpi A4 flatbed giving unbeatable scan quality . | *July 2003* |
| ★★★★/8.3 | **Expression 1680 Pro**, Epson, *0800 220 546*, £895. Quality USB/SCSI 1,600-x-3,200dpi, 48-bit A4 scanner, but lacking FireWire. | *Expo 2002* |
| ★★★★/7.9 | **Expression 1640XL Pro**, Epson, *0800 220 546*, £2,219. SCSI/USB 1,600-x-1,300dpi, 42-bit A3 model that lacks FireWire. | *Expo 2002* |
| ★★★★/8.9 | **PowerLook 1120**, Umax, *0870 906 4400*, £849. FireWire 1,200-x-2,400dpi, 42-bit A4 scanner offers great balance of features. | *Expo 2002* |
| ★★★★/7.8 | **PowerLook 2100XL**, Umax, *0870 906 4400*, £999. SCSI-2, 42-bit A3 scanner offers modest resolution of 800-x-1,600dpi. | *Expo 2002* |
| ★★★★/7.0 | **ScanJet 8290**, HP, *0870 547 4747*, £1,449. 4,800dpi; transparency adaptor; 25ppm document feeder; software is Windows-only. | *Nov 2003* |
| ★★★★/8.8 | **ScanMaker 9800XL** Microtek, *01327 844 880*, £1,748. FireWire/SCSI-2/USB 2.0, 1,600-x-1,300dpi, 48-bit A3 scanner. | |

**Film scanners** *(All prices include VAT)*

| | | |
|---|---|---|
| ★★★★/7.8 | **SmartScan 2700**, SmartDisk, *01252 530 960*, £189. Easy to use, inexpensive 2,700-pixel USB film scanner. | *July 2003* |
| ★★★/6.7 | **SmartScan 3600**, SmartDisk, *01252 530 960*, £189. 3,600-pixel FireWire film scanner that suffers from limited dynamic range. | *July 2003* |
| ★★★★/8.0 | **Dimage Scan Dual III**, Minolta, *01908 200 400*, £299. 2,820dpi Film scanner offering excellent dynamic range and colour fidelity. | *July 2003* |
| ★★★★/8.5 | **Dimage Scan Elite II**, Minolta, *01908 200 400*, £549. 2,820dpi FireWire film scanner with Digital ICE and GEM technologies. | *July 2003* |

## STORAGE & UPGRADES

*Hard drives, CD, DVD, removable solutions, servers, and processor-upgrade cards*

**Hard drives:** It's easy to add extra internal hard disks to Power Macs, but other Macs are better served with external drives. All new Macs come with FireWire connections, which are much faster than USB.

You can buy portable FireWire hard drives that you can carry around with you, and also larger, faster drives that sit on the desktop. Buy FireWire 800 drives if your Mac has this super-fast port. Go for the fastest rotational disk speed (measured in rpm), and divide the price by the number of gigabytes to find the price per GB. Buy as big as you can now, to save having to buy again later.

**Removable disks:** Apple has turned its back on the now defunct 1.4MB **floppy** (what do you think email is for?) but you can still add a USB floppy drive for about £60.

**Zip** drives are still used for backup. The 250MB Zip supports original 100MB disks, and the 750MB model reads and writes 750MB and 250MB disks, and reads all 100MB disks. Despite the convenience of the format, it 's relatively expensive and less popular now that most Macs have some kind of optical storage as standard.

Subscribers to Apple's .Mac services (£65 per year) get 100MB of **iDisk** Web storage space, which can be used to quickly move data around the world.

**CD/DVD:** Optical storage technologies (**CD-R**, **CD-RW**, **DVD-R** and **DVD-RAM**) have become increasingly viable alternatives as prices fall dramatically. While stable and cheap – a blank 650MB CD-R sells for 45p – writing to a CD or DVD-RAM can be slow. CD-R is a write-once technology. But, unlike Jaz and Zip disks, dishing out CDs to friends or clients isn't financially painful. Your best CD choice may be a CD-RW (rewriteable) drive, which is a CD-R drive with the added ability to handle rewriteable media.

DVDs can hold 5.2GB of data, and the drives can read standard CDs. Watch movies on your Mac and play the latest multimedia DVDs. SuperDrive Macs can record DVDs that will play in domestic players. Apple's **iDVD** tool makes Macs so much better than Windows PCs in this regard. **MW**

**Servers**

| | | |
|---|---|---|
| ★★★★/8.0 | **Xserve**, Apple, from £2,399 including VAT. Apple's easy-to-manage enterprise server is well-placed to compete with PC solutions. | *Oct 2003* |

**Network Attached Storage**

| | | |
|---|---|---|
| ★★★★/8.5 | **Max**, CMS, *01256 681 246*, from £1,999. Fast and robust storage that's easy to use. | *Jan 2003* |

**Hard drives**

| | | |
|---|---|---|
| ★★★★/8.2 | **ABSplus**, CMS, *01256 681 246*, from £209. Portable FireWire backup solution. | *Jan 2003* |
| ★★★★/8.8 | **Big Disk 800**, LaCie, *020 7872 8000*, from £559. High-capacity FireWire 800 hard drives: 400GB (7,200rpm), 500GB (5,400rpm). | *Aug 2003* |
| ★★★★/8.5 | **Caviar WD2000**, Western Digital, @ Dabs, *www.westerndigital.com*, £201. Cheap, huge 200GB EIDE drive. | *June 2003* |
| ★★★★/8.4 | **Cobra 800**, EZQuest @ Channel Dynamics, *0870 60 70 540*, from £245. 7,200rpm FireWire 800 hard drive: 120/200/250GB. | *Aug 2003* |
| ★★★★/8.5 | **Crossfire 120GB**, SmartDisk, *01252 530 960*, from £153. FireWire/USB 2.0 hard drive. Compact, good software, but not too speedy. | *Expo 2003* |
| ★★★★/8.3 | **Desktop Hard Drive**, SmartDisk, *01252 530 960*, from £139. 7,200rpm FireWire hard drive: 80/120GB. | *April 2003* |
| ★★★★/8.3 | **Fire800**, WiebeTech @ Technical Earth, *020 8450 0303*, from £249. Reasonably priced 120/180/240GB. FireWire 800 drives. | *Aug 2003* |
| ★★★★/8.5 | **HDD 250**, Iomega, *www.iomega.co.uk*, £309. Fast 250GB FireWire hard-drive. Slow with USB 2.0, though. | *Expo 2003* |
| ★★★★/8.8 | **Ice Warrior 800**, Box Clever, *01525 240 188*, from £199. Affordable 120/200/250GB FireWire 800 hard drives. | *Aug 2003* |
| ★★★★/8.6 | **One Touch 250**, Maxtor, *01923 712 448*, £329. Attractive FireWire-only hard drive with decent software bundle. | *Expo 2003* |
| ★★★★/8.4 | **Personal Storage 5000**, Maxtor, *01923 716 105*, from £189. FireWire.USB backup solution. | *Jan 2003* |
| ★★★★/8.0 | **PowerPlay Pro**, SmartDisk, *01252 530 960*, from £59. Handy collar-clip-sized 64MB USB storage and music player. | *July 2003* |
| ★★★★/8.4 | **Rover**, SmartDisk, *01252 530 960*, £59. Radio-controlled USB slide-show remote-control with 32MB of storage | *July 2003* |
| ★★★★/8.5 | **The Kube 500GB**, Box Clever @ Mac & More, *01525 240 188*, from £599. 5,400rpm FireWire RAID hard drive. Also 400/240GB. | *May 2003* |
| ★★★★/8.0 | **Xserve RAID**, Apple, £8,999 including VAT. Impressive 2.52TB server-storage solution. | *Oct 2003* |

**External CD/DVD drives** (all inc. VAT).

| | | |
|---|---|---|
| ★★★★/8.5 | **Bravo Disc Publisher**, Primera, *01789 415 898 or 0870 870 1220*, from £1,700. CD/DVD duplicator that also prints disc labels. | *Oct 2003* |
| ★★★★/7.7 | **Boa FireWire DVD-RW**, EZQuest @ Channel Dynamics, *0870 607 0540*, £317. DVD-R that offers solid performance. | *May 2003* |
| ★★★★/8.6 | **d2 FireWire DVD-Rewritable Drive**, LaCie, *020 7872 8000*, £304. Includes CaptyDVD 1 Mac DVD-authoring software. | *May 2003* |
| ★★★★/8.6 | **Devideon**, Formac, *020 8533 2489*, £304. DVD-R that includes Devideon 2 Mac DVD-authoring software. | *May 2003* |
| ★★★★/7.4 | **DVD Revo FireWire SuperDrive 4x**, Cyclone, @ CompuB, *0800 018 6625*, £363. DVD-R that offers solid performance. | *May 2003* |

**Card readers** (all inc. VAT).

| | | |
|---|---|---|
| ★★★★/7.9 | **Media Reader**, Belkin, *00800 2235 5460*, £89 (inc. VAT). Multi-format storage-card reader for dock-equipped iPods. | *Expo 2003* |

**Upgrade cards** (all inc. VAT).

| | | |
|---|---|---|
| ★★★/6.9 | **PowerForce G4 ZIF 550/220**, PowerLogix, *www.powerlogix.com (see Int'l)*, £259. For beige G3, blue-&-white G3, pre-AGP G4 | *March 2003* |
| ★★★/6.8 | **PowerForce G4 Series 100 1GHz**, PowerLogix, *www.powerlogix.com (see Int'l)*, £630. AGP and Gb Ethernet PMG4s, Cube | *March 2003* |
| ★★★/6.6 | **PowerForce Dual G4 800MHz**, PowerLogix, *www.powerlogix.com (see Int'l)*, £690. AGP and Gb Ethernet PMG4. | *March 2003* |
| ★★★/6.5 | **PowerForce Dual G4 1GHz**, PowerLogix, *www.powerlogix.com (see Int'l)*, £1,030. AGP and Gb Ethernet PMG4. | *March 2003* |
| ★★★★/7.5 | **Encore/ZIF G4 500**, Sonnet, *www.sonettech.com (see Int'l)*, £259. Beige G3, blue-&-white G3, Pre-AGP G4. | *March 2003* |

# Andy Ihnatko

Apple revamped its PowerBook and iMac lines in 2003 – but the real headline grabber was the iTunes Music Store.

# That's *so* last year

I'm going to have to start by making a big, gooey, Las Vegas-style pitch for my audience's love and pity, here. See, I'm anxious to take a look back at 2003. It's a natural, because as I write this it's just a couple of days before Christmas. But *you'll* be reading this months in the future (hopefully not the one where cyborgs have become self-aware and turned on the race that created them, raining apocalyptic hellfire on most and binding the rest into slavery) and this isn't much on your mind.

Making things worse, I imagine that many of you impulsively purchased waterbeds in 2002. You fell for the relentless, screaming ads that ran promising "No Payments Until 2004!" While the bed was kind of fun for the first few weeks, you replaced it with a futon after a couple of months when the girlfriend left and now the bill's finally arrived for the full amount plus two years' worth of interest at 19 per cent. So on top of everything else you're feeling pretty bitter.

All in all, you really might not be in a most welcoming frame of mind for my commentary regarding Apple's Greatest Achievement Of 2003. Yet I forge ahead, heedless of the difficulty. I'm sure I can rely on the good will of most of you, and after three months of eating nothing but cheap Ramen noodles at every meal, the waterbed people are probably too physically weak to raise a fuss.

I'm still amazed by what Apple managed to do with the PowerBook line in such a short span. When it came to PowerBooks, Apple used to be a demonstration of why Soviet-style Communism failed. You want a portable Mac? You've got a portable Mac. You say you want a *different* portable Mac? Nonsense, comrade! This model was designed personally by the Premier himself, with the long-term march of our glorious Revolution in mind!

Today, we finally have a tiny PowerBook. We have cheap portable Macs and we have big PowerBook workstations. When it came time to replace the Titanium PowerBook, all they did was eliminate the elements that people disliked: chiefly, the Titanium. It's a terrific material in a stealthy fighter-bomber and when I finally take my Keith Moon worship one step too far and need to have my heart valves replaced, it's Titanium or nothing. But as the shell for a device I'm going to toss in a bag and carry all over the world? Maybe not. I love my TiBook, but after three years it's starting to look just a little bit like an exhumed corpse.

More recently, we saw the release of the 20-inch iMac. Making a big-screen version was a natural choice and an immediate crowd-pleaser. Apart from the practical advantages, it's a testament to Apple's design skill. Who would have thought that such a bizarre form-factor would remain practical and useful for so long, supporting so many different incarnations? Unlike the original iMac, this design has legs. Well, no it doesn't. But it'll definitely stay in the Macintosh product line longer. I've had one here in the office for a few weeks and while I love the thing, it's a little creepy.

I couldn't put my finger on why, either. I finally realized that I was feeling the same sort of unease that I get when there's a promotion down at the mall and an adult actor is meeting and greeting kids in a huge Tweety Bird costume. Tweety is *supposed* to be small enough to fit inside Sylvester's mouth. At those proportions, he's adorable. Scaling him up to twelve times his normal size doesn't make him twelve times cuter. It makes you wonder whether or not he's going to turn on you when you run out of food.

But what was Apple's Most Significant And Far-Reaching Achievement Of 2003? The iTunes Music Store. As the company has done so often, it took a struggling concept and showed how it should be done. Within months, the online music stores that predated iTunes changed the way they did business. As it started making money and became a major force in music marketing, others got into the fray. Napster came back. Electronics chains started selling music digitally. Hardware makers struck deals to access music catalogues.

The field will only get more crowded. Microsoft has announced that while it isn't getting into the business itself, it'll be selling software and services that will allow *anybody* to open their own online music store. Clearly it's learned from the example of all those men who made their fortunes during the Gold Rush. Moving West and joining the fools digging for gold is a far dicier proposition than moving West and selling picks and shovels at 800 per cent markup.

Already, prices are falling and profit margins are narrowing. Soon the heavy-hitters will cut their prices below their costs to gain market share. CD manufacturers won't be able to compete with zero-cost inventory and shipping, and will fold. Publishers will then increase their licence fees to e-stores, causing many to fold and cutting publishers' revenue even more. At this stage, they will lack the money to invest in new artists, so they'll rely on their back-catalogues for income. Consumers, who've purchased The White Album three or four times already, hold on to their money and before long the whole system goes down the drain.

So my hat's off to Apple and the iTunes Store: it has assured the demise of every megaconglomerate music publisher, forcing musicians to produce their own albums, retaining control over the process, keeping the lion's share of the revenue. Apple has ensured that future Pop Idols will make shakes and fries – not albums. Just as God intended.

I didn't think that Apple would ever give a greater gift to the world than the Macintosh operating system, but (as anyone who heard Gareth Gates sing "Suspicious Minds" will agree) I'm delighted to be wrong. MW

**'The iTunes Store has assured the demise of every giant music-publisher and ensured that future Pop Idols will make shakes and fries – not albums. Just as God intended.'**



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